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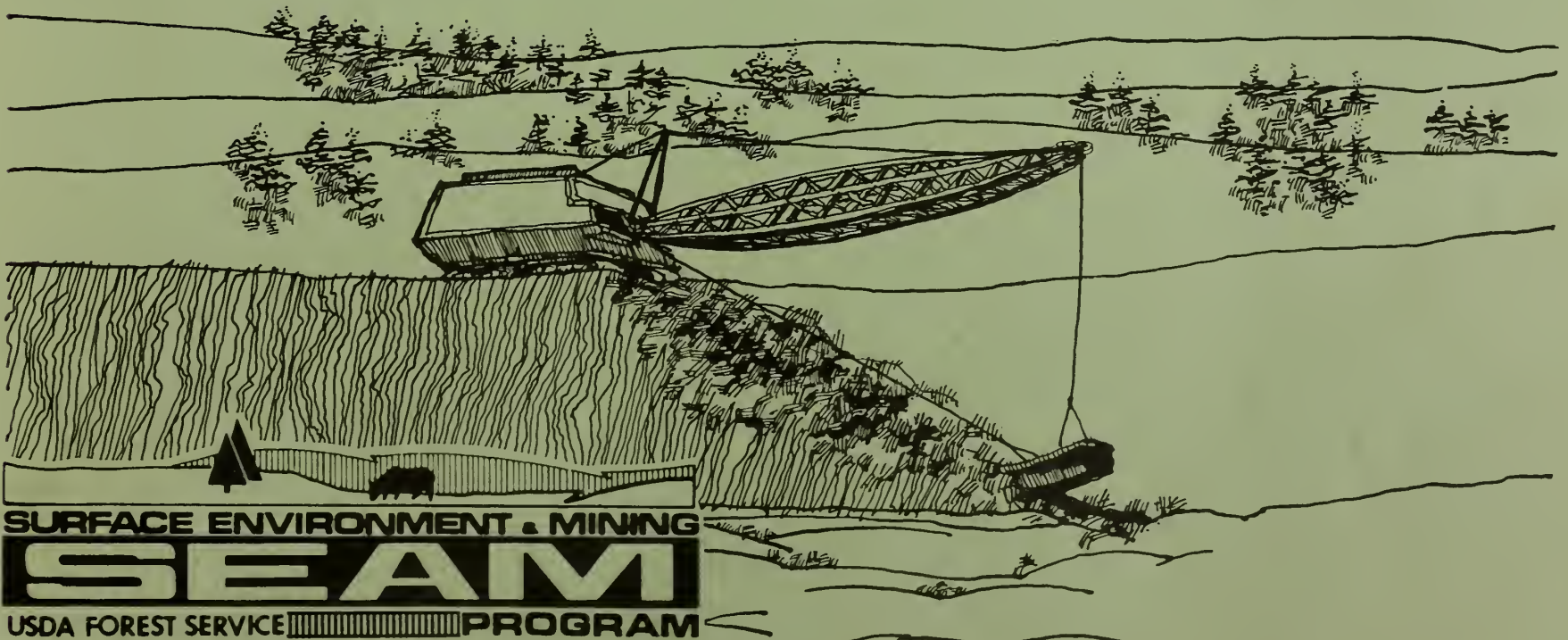
# AMPLAN LAIM PROGRAM LISTING

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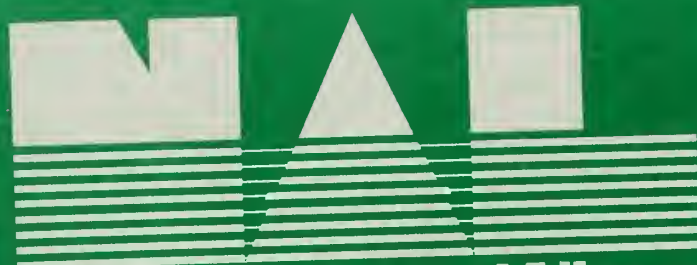
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Experiment Station

Montana State University  
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## CLAIM

### Computerized Reclamation Planning System for Northern Great Plains Surface Coal Mines

## PROGRAM LISTING

June, 1980

for

USDA Forest Service  
Intermountain Forest and Range Experiment Station  
Surface Environment and Mining (SEAM) Program

Montana State University, Cooperating

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## PREFACE

This manual is divided into two segments:

1. CLAIM source listings

The system executive, CLAIM, is presented first, followed by all CLAIM subprograms, listed in alphabetical order.

2. CLAIM swap control programs

These programs contain the majority of the system dependent code required to swap control between various program segments.



# TABLE OF CONTENTS

	PAGE
Section I: CLAIM source listings	
&CLAIM - CLAIM executive . . . . .	1
&ALTRN - Label common ALTERN . . . . .	13
&ANIMA - Animal Category - Full Display . . . . .	14
&AXES - Draw axes for dragline graphs . . . . .	20
&BUILD - Build tables for dragline relationships . . . . .	23
&CAT10 - Socio-economics-abbreviated display . . . . .	26
&CAT2 - Climatology - abbreviated display . . . . .	29
&CAT3 - Topsoil - abbreviated display . . . . .	32
&CAT4 - Subsoil - abbreviated display . . . . .	36
&CAT5 - Overburden - abbreviated display . . . . .	40
&CAT6 - Surface Water Hydrology - abbreviated display . . . . .	44
&CAT7 - Ground Water Hydrology - abbreviated display . . . . .	47
&CAT8 - Vegetation - abbreviated display . . . . .	50
&CAT9 - Animal - abbreviated display . . . . .	53
&CLIMA - Climatology - full display . . . . .	56
&CNVRT - Convert to alphanumeric . . . . .	61
&CTIL - Label common CTIL . . . . .	63
&DCDS1 - Display Current Data - Segment 1 . . . . .	64
&DCDS2 - Display Current Data - Segment 2 . . . . .	74
&DCEV - Display Current Expectation Values . . . . .	82
&DLDCS - Dragline: Display current slopes . . . . .	87
&DLFCA - Dragline: Final cut - correct area . . . . .	92
&DLFIA - Dragline: Final cut - Initial Area . . . . .	94
&DLFID - Dragline: Final cut - Initial Data . . . . .	95
&DLGCM - Dragline: Grading Computations - Mine run . . . . .	99
&DLGCF - Dragline: Grading Computations - Final cut . . . . .	102
&DLGCO - Dragline: Grading Computations - Opening cut . . . . .	104
&DLGE - Dragline: Grading Executive . . . . .	107
&DLIOF - Dragline: Input recommended slopes - Opening and Final cut . . . . .	112
&DLIRM - Dragline: Input recommended slopes - Mine run . . . . .	115
&DLISP - Dragline: Input Slope/Percent pairs . . . . .	118
&DLMID - Dragline: Mine run Initial Data . . . . .	123
&DLOID - Dragline: Opening cut Initial Data . . . . .	127
&DLRLE - Dragline: Relationship Executive . . . . .	131
&DLRSL - Dragline: Recommended Slopes . . . . .	133
&DLST - Dragline: Summary Table . . . . .	134
&DLTDR - Dragline: Tables of Dragline Relationship . . . . .	140
&DSPLA - Display current initial data . . . . .	142
&DVN - Draw vector numbers . . . . .	145
&EIAD - Environmental Input - Abbreviated Display . . . . .	149
&EIFD - Environmental Input - Full Display . . . . .	152
&FEASI - Feasibility analysis . . . . .	156
&FIXLN - Fix Line of Output . . . . .	163
&FIXSP - Fix Slope/Percent . . . . .	165





&GDE	- General Description Executive . . . . .	168
&GENDE	- General Description - Full display . . . . .	173
&GETID	- Get Initial Data . . . . .	178
&GRAFS	- Draw Graphs . . . . .	184
&GRWHY	- Ground Water Hydrology - Full display . . . . .	188
&IEVS	- Input Expectation Values . . . . .	194
&ISNEV	- Input/Store Non-standard Expectation Values . . . . .	196
&MNMXF	- Minimum/Maximum Final slope values . . . . .	203
&OPUSE	- Optimum Use analysis . . . . .	205
&OVRBD	- Overburden - Full display . . . . .	209
&SOCEC	- Socio-Economics - Full display . . . . .	218
&SRCD	- Store/Retrieve CLAIM Data . . . . .	224
&SUBSO	- Subsoil - Full display . . . . .	231
&SURHY	- Surface Water Hydrology - Full display . . . . .	238
&TABLE	- Label common table . . . . .	244
&TCON $\phi$	- TECON submodule . . . . .	245
&TCON1	- TECON submodule . . . . .	248
&TCON2	- TECON submodule . . . . .	251
&TCON3	- TECON submodule . . . . .	254
&TCONE	- TECON Edit . . . . .	258
&TCON4	- TECON submodule . . . . .	262
&TCON5	- TECON submodule . . . . .	265
&TECON	- Techniques and Economics analysis . . . . .	268
&TFCD	- Test for Complete Data . . . . .	280
&TOPSO	- Topsoil - Full display . . . . .	285
&TSBLA	- Truck and Shovel: Bench Length Adjustment . . . . .	293
&TSDBR	- Truck and Shovel: Determine Bench Removed . . . . .	298
&TSGE	- Truck and Shovel: Grading Executive . . . . .	299
&TSIFG	- Truck and Shovel: Input Final slopes - Graphic mode . . . . .	305
&TSIFN	- Truck and Shovel: Input Final slopes - Nongraphic mode . . . . .	313
&TSIHB	- Truck and Shovel: Input Highwal/Bench information . . . . .	320
&TSRC	- Truck and Shovel: Recalculations . . . . .	326
&TSRIE	- Truck and Shovel: Rehandle Input/Edit . . . . .	328
&TSSCI	- Truck and Shovel: Selective Changes to Initial data . . . . .	331
&TSSCF	- Truck and Shovel: Selective Changes to Final slopes . . . . .	337
&TSSCK	- Truck and Shovel: Slope Check . . . . .	342
&TSST	- Truck and Shovel: Summary Table . . . . .	343
&TSSTP	- Truck and Shovel: Summary Table - Plotter . . . . .	350
&TSVCA	- Truck and Shovel: Volumes, Costs, and Area . . . . .	351
&TSXBA	- Truck and Shovel: X-sect of Bench Adjustments . . . . .	356
&TSXFS	- Truck and Shovel: X-sect of Final Slopes . . . . .	361
&TSXST	- Truck and Shovel: X-sect with summary table . . . . .	366
&VEGET	- Vegetation - Full display . . . . .	371
CCFTS	- Costs For TECON Subsystem (data file) . . . . .	376
DLRSON	- Dragline Recommended Slopes - Opening/Final cut (data file). . . . .	377
DLRSPM	- Dragline Recommended Slopes/Percents - Mine run (data file). . . . .	378
EXPTNS	- Expectation values (data file) . . . . .	379
MLT	- Master List Techniques (data file) . . . . .	383
TEXTTEC	- Text for Environmental Categories (data file). . . . .	384
TSRFS	- Truck and Shovel Final Slopes (data file). . . . .	389



CLAIM 1=00004 IS ON CR00015 USING 00083 BLKS R=0000

```
0001 FIN4
0002 C ===== PROGRAM CLAIM =====
0003 C =
0004 C =
0005 C =
0006 C = ** Scheduling executive for the CLAIM reclamation system **
0007 C =
0008 C =
0009 C =
0010 C =
0011 C =
0012 C = *****
0013 C = *****
0014 C = **
0015 C = ** OFFICE OF RESEARCH & DEVELOPMENT **
0016 C = ** MONTANA STATE UNIVERSITY **
0017 C = **
0018 C = ** M. DOUGLAS SCOTT **
0019 C = ** ORVILLE D. GREEN **
0020 C = ** STEVEN A. EASTMAN **
0021 C = **
0022 C = *****
0023 C = *****
0024 C =
0025 C =
0026 C =
0027 C =
0028 C =====
0029 C
0030 C
0031 C
0032 C
0033 C
0034 C THE CLAIM RECLAMATION PLANNING SYSTEM WAS DEVELOPED BY
0035 C DR. M. DOUGLAS SCOTT OF MONTANA STATE UNIVERSITY FOR THE
0036 C USDA FOREST SERVICE, AND PROGRAMMED BY ORVILLE D. GREEN
0037 C AND STEVEN A. EASTMAN. EASTMAN LAID THE GROUNDWORK FOR
0038 C THE FEASIBILITY ANALYSIS AND SPOILS GRADING, WHILE GREEN
0039 C EXPANDED THE SYSTEM TO ITS PRESENT CAPABILITIES.
0040 C
0041 C =====
0042 C
0043 C THE CLAIM SYSTEM PROVIDES THE RECLAMATION ENGINEER WITH AN
0044 C ENVIRONMENTAL FEASIBILITY RANKING, A TECHNIQUES AND ECONOMICS
0045 C ANALYSIS, AND AN OPTIMUM USE COMPARISON FOR THE FIVE POST
0046 C MINING LAND USES : CROPLAND, NATIVE VEGETATION, WILDLIFE,
0047 C WATER RECREATION, AND HIGH USE. ENVIRONMENTAL FEASIBILITY
0048 C ARE ALSO AVAILABLE FOR AN ARBRITRARY "OTHER" LAND USE.
0049 C
0050 C
0051 C ENVIRONMENTAL FEASIBILITY RANKINGS ARE DETERMINED BY AVERAGING
0052 C "EXPECTATION OF SUCCESS" VALUES ASSOCIATED WITH EACH CATEGORY
0053 C RESPONSE. THE EXPECTATION VALUES ARE INTEGERS IN THE RANGE 0-4,
0054 C WHERE 0 MEANS IMPOSSIBLE, AND 4 MEANS MANDATORY. CATEGORY
```



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0055 C  RESPONSES ARE GROUPED INTO TEN SETS :
0056 C      1.) GENERAL MINE DESCRIPTION
0057 C      2.) CLIMATOLOGY
0058 C      3.) TOPSOIL
0059 C      4.) SUBSOIL
0060 C      5.) OVERBURDEN
0061 C      6.) SURFACE WATER HYDROLOGY
0062 C      7.) GROUND WATER HYDROLOGY
0063 C      8.) VEGETATION
0064 C      9.) ANIMALS
0065 C     10.) SOCIO-ECONOMICS
0066 C  EACH OF THE ABOVE CATEGORIES CONTAIN A NUMBER OF HEADINGS,
0067 C  WHICH, IN TURN, CONTAIN SEVERAL SUBHEADINGS :
0068 C      I.) CATEGORY
0069 C          A.) HEADING
0070 C              1.) SUBHEADING, ETC.
0071 C  EACH SUBHEADING IS ASSIGNED AN EXPECTATION VALUE FOR EACH
0072 C  OF THE FIVE LAND USES, AND THE "OTHER" CATEGORY.
0073 C
0074 C  THE TECHNIQUES AND ECONOMICS ANALYSIS SEARCHES THE
0075 C  ENVIRONMENTAL RESPONSE SET FOR SPECIFIC COMBINATIONS
0076 C  OF CATEGORY RESPONSES THAT REQUIRE AN ADDITIONAL ENTRY
0077 C  TO THE "DEFAULT" LIST, OR DELETION OF AN ENTRY FROM
0078 C  THE DEFAULT LIST. ALSO INCLUDED IN THE TECHNIQUES AND
0079 C  ECONOMICS ANALYSIS IS A COST FOR GRADING SPOILS. SPOILS
0080 C  GRADING IS SIMULATED FOR BOTH THE DRAGLINE AND TRUCK AND
0081 C  SHOVEL TYPE SURFACE MINES.
0082 C
0083 C  THE OPTIMUM USE FACTORS COMBINES BOTH THE FEASIBILITY RANKINGS
0084 C  AND THE COSTS DETERMINED BY THE TECHNIQUES AND ECONOMICS
0085 C  ANALYSIS TO DETERMINE THE "BEST" POST MINING LAND USE OPTION.
0086 C
0087 C  THE "OTHER" CATEGORY IS NOT CONSIDERED IN EITHER THE TECHNIQUES
0088 C  AND ECONOMICS ANALYSIS, OR THE OPTIMUM USE DETERMINATION.
0089 C  THIS OPTION IS TOTALLY DEFINED BY THE USER.
0090 C  =====
0091 C
0092 C  PROGRAM CLAIM IS THE MAIN EXECUTIVE FOR THE CLAIM SYSTEM.
0093 C  SUBPROGRAMS ARE SCHEDULED ACCORDING TO USER SELECTION TO
0094 C  OPTION MENUS. THE OPTION MENUS FORM A TREE THAT THE USER
0095 C  MUST CLIMB DOWN, AND THEN BACK UP AGAIN. THE OPTION MENUS
0096 C  PRESENTED IN THIS PROGRAM ARE EASILY READ IN THE FORMAT
0097 C  STATEMENTS AT THE END OF THE PROGRAM.
0098 C
0099 C  PROGRAM CLAIM SCHEDULES THE FOLLOWING SUBROUTINES :
0100 C  "GETID" TO GET THE INITIAL DATA
0101 C  "ISNEV" TO INPUT/STORE NON-STANDARD EXPECTATION VALUES
0102 C  "GDE" TO HANDLE GENERAL DESCRIPTION ENTRIES
0103 C  "EIAD" TO HANDLE ENVIRONMENTAL INPUT (ABBREVIATED DISPLAY)
0104 C  "EIFD" TO HANDLE ENVIRONMENTAL INPUT/EDIT (FULL DISPLAY)
0105 C  "SRCD" TO STORE/RETRIEVE CLAIM DATA
0106 C  "DCDS1" AND "DCDS2" TO DISPLAY THE CURRENT DATA SET
0107 C  "DCEV" TO DISPLAY THE CURRENT EXPECTATION VALUES
0108 C  "TSGE" TO HANDLE TRUCK AND SHOVEL GRADING -GRADE SPOILS ONLY OPTION
0109 C  "FEASI" TO COMPUTE FEASIBILITY RANKINGS
0110 C  "TECON" TO DETERMINE THE TECHNIQUES AND ECONOMICS LISTING

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```

0111 C "OPUSE" TO CALCULATE OPTIMUM USE FACTORS
0112 C "TFCD" TO TEST FOR COMPLETE DATA
0113 C "TCONE" TO EDIT TECON COSTS
0114 C
0115 C CLAIM ALSO USES THE SYSTEM ROUTINES :
0116 C "EXEC" FOR DISK TRACK ALLOCATION (SWAP CONTROL)
0117 C "RMPAR" TO RETRIEVE THE LOGICAL UNIT OF THE TERMINAL
0118 C
0119 C THE TCS ROUTINES : ERASE,HOME,INITI,NEWPG, AND IOWAT ARE
0120 C ALSO USED.
0121 C
0122 C PRINCIPAL LOCAL VARIABLES ARE :
0123 C "IPTR" - MAIN OPTION POINTER
0124 C "IPTR1" - SUB OPTION POINTER
0125 C "IMINE" - CURRENT TYPE OF MINE
0126 C "ISTAGE" - CURRENT STAGE IN MINING SEQUENCE
0127 C "CSTEST" - CURRENT COST TO EXCAVATE SPOIL
0128 C
0129 C
0130 C THIS EXECUTIVE WAS WRITTEN BY ORVILLE D. GREEN
0131 C
0132 C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0133 C
0134 C =====
0135 C
0136 C PROGRAM CLAIM
0137 C
0138 C
0139 C TEKTRONIX COMMON
0140 C
0141 C COMMON ITEK (45)
0142 C
0143 C LOGICAL UNITS AND COMMON LOCATION
0144 C
0145 C COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0146 C
0147 C POINTERS
0148 C
0149 C COMMON EXIT ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0150 C COMMON IOPTN ,IOVR(7),IPNTR ,ISOC(6),ISUB(8)
0151 C COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT ,LUD
0152 C COMMON MODE ,NANM ,NCLI ,NGEN ,NGRW
0153 C COMMON NOVR ,NSECTS ,NSOC ,NSUB ,NSUR
0154 C COMMON NTOP ,NU ,NVEG
0155 C
0156 C GRADING PARAMETERS
0157 C
0158 C COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCPA(5)
0159 C COMMON GRODVS(5),HWHT(5,10),HWSLI(5,10),NSPP(5),PCEQ19(4)
0160 C COMMON PERCNT(5,10),REHCFY(5),REHVOL(5),SLOPE(5,10),WBP
0161 C
0162 C CATEGORY TEXT
0163 C
0164 C COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0165 C COMMON OVRD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0166 C COMMON TPSL(49,13),VGTA(15,13)

```



```

0167 C
0168 C      EXPECTATION VALUES
0169 C
0170      COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0171      COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0172      COMMON TOPSOI(33,6),VEGETA(10,6)
0173 C
0174 C      CATEGORY RESPONSES
0175 C
0176      COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0177      COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0178      COMMON RTOPSO(9),RVEGET(2)
0179 C
0180 C      FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0181 C
0182      COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CARHM
0183      COMMON CABS(2),CAC,CACF,CADF,CADH
0184      COMMON CADS,CAEAF,CAHSAF,CAHSTS,CAIP
0185      COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0186      COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0187      COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0188 C
0189      INTEGER EXIT,CLMA,GDES,GWHY,OVRBD,SBSL
0190      INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0191      INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0192      INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0193      INTEGER VEGETA,ANIMAL
0194      INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0195      INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0196      INTEGER RCLTEC,TTL
0197 C
0198      INTEGER COMMON (1)
0199      EQUIVALENCE (COMMON (1), ITEK (1))
0200      EQUIVALENCE (IARRY (1), LUT)
0201      EQUIVALENCE (IARY2 (1), ISTRK)
0202      EQUIVALENCE (IARY2 (2), ISECT)
0203      EQUIVALENCE (IARY2 (3), ICODE)
0204      EQUIVALENCE (IARY2 (4), LEN)
0205 C
0206      LOGICAL LER
0207 C
0208      DATA LP/6/
0209 C
0210 C CLEAR THE COMMON BLOCK
0211 C
0212      DO 10 I = 1, 6176
0213      10 COMMON(I) = 0
0214 C
0215 C GET THE LOGICAL UNIT OF THE TERMINAL
0216 C
0217      CALL RMPAR(IARRY)
0218      IF(LUT.EQ.0) LUT = 1
0219      IARRY(2) = 0
0220 C
0221 C ALLOCATE TRACKS FOR THE COMMON BLOCK
0222 C

```

```

0223      CALL EXEC(15,2,1STRK,1DISC,1SECT)
0224      ISECT = 0
0225  C
0226  C DETERMINE ERASE CAPABILITY
0227  C
0228      LER = .FALSE.
0229      WRITE(LUT,1000)
0230      READ (LUT,1001) IANS
0231      IF(IANS.EQ.2HYES) LER = .TRUE.
0232  C
0233  C INITIALIZE THE COMMON BLOCK
0234  C
0235      IF(LER) CALL INITT(LUT)
0236      IF(LER) CALL NEWPG
0237      IF(LER) CALL IDWAT(90)
0238      WRITE(LUT,1002)
0239      CALL GETID
0240      IF(EXIT.EQ.-1) GOTO 850
0241  C
0242  C DISPLAY OPTIONS
0243  C
0244      25 IF(LER) CALL NEWPG
0245      IF(LER) CALL IDWAT(90)
0246      WRITE(LUT,1002)
0247      WRITE(LUT,1003)
0248      30 READ(LUT,*) IPTR
0249      IF(IPTR.EQ.0) GOTO 900
0250      IF(IPTR.EQ.5) GOTO 500
0251      IF(IPTR.GE.1.AND.IPTR.LE.6) GOTO 35
0252      WRITE(LUT,1004)
0253      GOTO 30
0254  C
0255  C CLEAR SCREEN AND BRANCH TO IPTR OPTION
0256  C
0257      35 IF(LER) CALL NEWPG
0258      IF(LER) CALL IDWAT(90)
0259      WRITE(LUT,1002)
0260      GOTO(100,200,300,400,501,600) IPTR
0261  C
0262  C DATA INPUT OPTION
0263  C
0264      100 MODE = 1
0265      EXIT = 2
0266      LEXIT = 1
0267      IOPTN = 1
0268      WRITE(LUT,1005)
0269      105 READ(LUT,*) IPTR1
0270      IF(IPTR1.GE.0.AND.IPTR1.LE.8)
0271      >GOTO(25,110,120,130,140,150,160,170,190) IPTR1+1
0272      WRITE(LUT,1004)
0273      GOTO 105
0274  C
0275  C MANUAL INPUT OF THE GENERAL MINE DESCRIPTION
0276  C
0277      110 IPNTR = 1
0278      CALL GDE

```

```

0279          GOTO 180
0280 C
0281 C FILE INPUT OF GENERAL DESCRIPTION
0282 C
0283     120 IPNTR = 1
0284         GOTO 175
0285 C
0286 C MANUAL INPUT OF ENVIRONMENTAL DATA
0287 C
0288     130 IPNTR = 2
0289         WRITE(LUT,1006)
0290         READ(LUT,1001) IANS
0291         IF(IANS.EQ.2HFD) GOTO 135
0292     133 CALL EIAD
0293         GOTO 180
0294     135 CALL EIFD
0295         GOTO 180
0296 C
0297 C FILE INPUT OF ENVIRONMENTAL DATA
0298 C
0299     140 IPNTR = 2
0300         GOTO 175
0301 C
0302 C FILE INPUT OF ENTIRE CLAIM DATA SET
0303 C
0304     150 IPNTR = 3
0305         GOTO 175
0306 C
0307 C MANUAL INPUT OF NON-STANDARD EXPECTATION VALUES
0308 C
0309     160 IPNTR = 1
0310         GOTO 172
0311 C
0312 C FILE INPUT OF NON - STANDARD EXPECTATION VALUES
0313 C
0314     170 IPNTR = 3
0315     172 CALL ISNEV
0316         GOTO 35
0317 C
0318 C CALL DATA STORAGE EXECUTIVE TO RETRIEVE FILE
0319 C
0320     175 CALL SRCD
0321 C
0322 C TEST FOR COMPLETE DATA
0323 C
0324     180 CALL TFCD
0325         MODE = 1
0326         IF(10PTN.EQ.1) GOTO(110,130,130) IPNTR
0327         GOTO 35
0328 C
0329 C INPUT TITLE TO APPEAR ON OUTPUT
0330 C
0331     190 WRITE(LUT,1020)
0332         READ(LUT,1021) TTL
0333         GOTO 35
0334 C

```



```

0335 C DATA EDIT OPTION
0336 C
0337 200 WRITE(LUT,1007)
0338 205 READ(LUT,*) IPTR1
0339 IF(IPTR1.GE.0.AND.IPTR1.LE.5)
0340 >GOTO(25,210,220,230,240,250) IPTR1+1
0341 WRITE(LUT,1004)
0342 GOTO 205
0343 C
0344 C EDIT CATEGORY RESPONSES TO THE GENERAL DESCRIPTION
0345 C
0346 210 MODE = 2
0347 CALL GDE
0348 GOTO 35
0349 C
0350 C EDIT RESPONSES TO ENVIRONMENTAL DATA
0351 C
0352 220 MODE = 2
0353 GOTO 245
0354 C
0355 C EDIT EXPECTATION OF SUCCESS VALUES FOR THE GENERAL DESCRIPTION
0356 C
0357 230 MODE = 3
0358 CALL GDE
0359 GOTO 35
0360 C
0361 C EDIT EXPECTATION OF SUCCESS VALUES FOR ENVIRONMENTAL DATA
0362 C
0363 240 MODE = 3
0364 C
0365 C SCHEDULE FULL DISPLAY ENVIRONMENTAL EXECUTIVE
0366 C
0367 245 CALL EIFD
0368 GOTO 35
0369 C
0370 C EDIT TECON COSTS
0371 C
0372 250 CALL TCONE
0373 GOTO 35
0374 C
0375 C DATA REVIEW OPTION
0376 C
0377 300 WRITE(LUT,1008)
0378 305 READ (LUT,*) IPTR1
0379 IF(IPTR1.GE.0.AND.IPTR1.LE.2)
0380 >GOTO(25,310,330) IPTR1+1
0381 WRITE(LUT,1004)
0382 GOTO 305
0383 310 LUL = LUT
0384 WRITE(LUT,1009)
0385 READ (LUT,1001) IANS
0386 IF(IANS.EQ.2HLP) LUL = LP
0387 GOTO(320,330) IPTR1
0388 C
0389 C DISPLAY CURRENT DATA SET
0390 C

```

```

0391 320 CALL DCDS1
0392 IF(EXIT.EQ.-1) GOTO 35
0393 CALL DCDS2
0394 GOTO 35
0395 C
0396 C DISPLAY CURRENT EXPECTATION VALUES
0397 C
0398 330 CALL DCEV
0399 GOTO 35
0400 C
0401 C DATA STORAGE OPTION
0402 C
0403 400 IOPTN = 2
0404 WRITE(LUT,1010)
0405 405 READ (LUT,*) IFTR1
0406 IF(IFTR1.GE.0.AND.IFTR1.LE.4)
0407 >GOTO(25,410,420,430,440) IFTR1+1
0408 WRITE(LUT,1004)
0409 GOTO 405
0410 C
0411 C STORE GENERAL DESCRIPTION
0412 C
0413 410 IPNTR = 1
0414 GOTO 435
0415 C
0416 C STORE ENVIRONMENTAL DATA RESPONSES
0417 C
0418 420 IPNTR = 2
0419 GOTO 435
0420 C
0421 C STORE THE ENTIRE CLAIM DATA SET
0422 C
0423 430 IPNTR = 3
0424 435 CALL SRCD
0425 GOTO 35
0426 C
0427 C STORE THE CURRENT CATEGORY EXPECTATION VALUES
0428 C
0429 440 IPNTR = 2
0430 CALL ISNEV
0431 GOTO 35
0432 C
0433 C DATA ANALYSIS OPTION
0434 C
0435 500 IPNTR = 3
0436 CALL TFCD
0437 MODE=1
0438 IF(IOPTN.EQ.1) GOTO(110,130,130) IPNTR
0439 IF(LER) CALL ERASE
0440 IF(LER) CALL HOME
0441 501 WRITE(LUT,1011)
0442 505 READ (LUT,*) IFTR1
0443 IF(IFTR1.EQ.0) GOTO 25
0444 IF(IFTR1.GE.1.AND.IFTR1.LE.3) GOTO 510
0445 WRITE(LUT,1004)
0446 GOTO 505

```

```

0447      510 LUL = LUT
0448      WRITE(LUT,1009)
0449      READ (LUT,1001) IANS
0450      IF(IANS.EQ.2HLP)      LUL = LP
0451      GOTO(520,530,540) IPTR1
0452      C
0453      C FEASIBILITY ANALYSIS
0454      C
0455      520 IPNTR = 1
0456      CALL FEASI
0457      GOTO 35
0458      C
0459      C TECON ANALYSIS
0460      C
0461      530 IPNTR = 1
0462      CALL TECON
0463      GOTO 35
0464      C
0465      C OPUSE ANALYSIS
0466      C
0467      540 IPNTR = 3
0468      CALL FEASI
0469      CALL TECON
0470      CALL OPUSE
0471      GOTO 35
0472      C
0473      C GRADE SPOILS WITHOUT LAND USE OPTION RESTRICTIONS
0474      C
0475      600 MODE=4
0476      LUO=1
0477      IMINE=RGENDE(1)
0478      ICUT=RGENDE(2)
0479      CSTEST=CSTES
0480      WRITE(LUT,1012)
0481      605 READ(LUT,*) IPTR1
0482      IF(IPTR1.EQ.0) GOTO 25
0483      IF(IPTR1.GT.0.AND.IPTR1.LE.6) GOTO 610
0484      WRITE(LUT,1004)
0485      GOTO 605
0486      610 IF(IPTR1.GT.3) GOTO 615
0487      RGENDE(1)=1
0488      RGENDE(2)=IPTR1
0489      CALL GDE
0490      GOTO 625
0491      615 RGENDE(1)=2
0492      RGENDE(2)=IPTR1-3
0493      WRITE(LUT,1022)
0494      READ(LUT,*) COGO
0495      IF(COGO.EQ.-1.) GOTO 625
0496      CALL TSGE
0497      GOTO 625
0498      C
0499      C RESET TYPE OF MINE AND STAGE IN MINING SEQUENCE TO PRE-OPTION
0500      C VALUES, AND SET ALL GRADING PARAMETERS TO ZERO.
0501      C
0502      625 RGENDE(1)=IMINE

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```

0503      RGENIE(2)=ICUT
0504      CSTES=CSTEST
0505      DO 630 K=128,794
0506 630 COMMON(K)=0
0507      GOTO 35
0508 C
0509 C COMMON INITIALIZATION FAILURE
0510 C
0511      850 WRITE(LUT,1013)
0512 C
0513 C RELEASE TRACKS AND QUIT
0514 C
0515      900 CALL EXEC(16,2,ISTRK,IDISC,ISECT)
0516 C
0517 C FORMAT STATEMENTS
0518 C
0519      1000 FORMAT(1X"ARE YOU USING A CRT TERMINAL WITH ERASE"/
0520      >          1X"CAPABILITY ?(YES OR NO) -> _")
0521 C
0522      1001 FORMAT(A2)
0523 C
0524      1002 FORMAT(15X"*****"/
0525      >          15X"                                *"/
0526      >          15X"                                CLAIM                                *"/
0527      >          15X"                                *"/
0528      >          15X"    COMPUTERIZED RECLAMATION                                *"/
0529      >          15X"                                PLANNING SYSTEM                                *"/
0530      >          15X"                                *"/
0531      >          15X"*****")
0532 C
0533      1003 FORMAT(1X"-----"/
0534      >          1X" OPTIONS "/
0535      >          1X"-----"//
0536      >          1X"0 -> TERMINATE CLAIM"//
0537      >          1X"1 -> DATA INPUT"//
0538      >          1X"2 -> DATA EDIT"//
0539      >          1X"3 -> CURRENT DATA REVIEW"//
0540      >          1X"4 -> DATA STORAGE"//
0541      >          1X"5 -> DATA ANALYSIS"//
0542      >          1X"6 -> GRADE SPOILS WITHOUT CURRENT"/
0543      >          1X"    LAND USE OPTION RESTRICTIONS"///
0544      >          1X"ENTER OPTION SELECTION -> _")
0545 C
0546      1004 FORMAT(1X" ?? ERROR. RE-INPUT -> _")
0547 C
0548      1005 FORMAT(1X"-----"/
0549      >          1X" DATA INPUT "/
0550      >          1X"-----"//
0551      >          1X"0 -> EXIT FROM DATA INPUT OPTION"//
0552      >          1X"1 -> MANUAL INPUT OF THE GENERAL MINE DESCRIPTION"//
0553      >          1X"2 -> FILE INPUT OF THE GENERAL MINE DESCRIPTION"//
0554      >          1X"3 -> MANUAL INPUT OF ENVIRONMENTAL DATA"//
0555      >          1X"4 -> FILE INPUT OF ENVIRONMENTAL DATA"//
0556      >          1X"5 -> FILE INPUT OF BOTH ENVIRONMENTAL DATA  "/
0557      >          1X"    AND GENERAL MINE DESCRIPTION"//
0558      >          1X"6 -> MANUAL INPUT OF NON-STANDARD EXPECTATION"1X

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0559      >*VALUES*//
0560      >          1X*7 -> FILE INPUT OF NON-STANDARD EXPECTATION*1X
0561      >*VALUES*//
0562      >          1X*8 -> INPUT TITLE TO APPEAR ON ALL OUTPUT*///
0563      >          1X*ENTER YOUR SELECTION -> _*)
0564  C
0565  1006 FORMAT(1X*ABBREVIATED OR FULL DISPLAY ?(AD OR FD) -> _*)
0566  C
0567  1007 FORMAT(1X*-----*/
0568      >          1X* DATA EDIT */
0569      >          1X*-----*/
0570      >          1X*0 -> EXIT FROM DATA EDIT OPTION*//
0571      >          1X*1 -> EDIT THE GENERAL MINE DESCRIPTION*//
0572      >          1X*2 -> EDIT RESPONSES TO ENVIRONMENTAL DATA*//
0573      >          1X*3 -> EDIT EXPECTATION OF SUCCESS VALUES FOR*/
0574      >          1X*          THE GENERAL MINE DESCRIPTION*//
0575      >          1X*4 -> EDIT EXPECTATION OF SUCCESS VALUES FOR*/
0576      >          1X*          ENVIRONMENTAL DATA*//
0577      >          1X*5 -> EDIT TECON COSTS*///
0578      >          1X*ENTER YOUR SELECTION -> _*)
0579  C
0580  1008 FORMAT(1X*-----*/
0581      >          1X* CURRENT DATA REVIEW */
0582      >          1X*-----*/
0583      >          1X*0 -> EXIT FROM DATA REVIEW OPTION*//
0584      >          1X*1 -> DISPLAY CURRENT CLAIM DATA SET*//
0585      >          1X*2 -> DISPLAY CURRENT EXPECTATION OF SUCCESS*1X
0586      >*VALUES*///
0587      >          1X*ENTER YOUR SELECTION -> _*)
0588  C
0589  1009 FORMAT(1X*DISPLAY ON TERMINAL OR LINE PRINTER ?(TT OR LP) ->_*)
0590  C
0591  1010 FORMAT(1X*-----*/
0592      >          1X* DATA STORAGE */
0593      >          1X*-----*/
0594      >          1X*0 -> EXIT FROM THE DATA STORAGE OPTION*//
0595      >          1X*1 -> STORE THE CURRENT GENERAL DESCRIPTION*//
0596      >          1X*2 -> STORE THE ENVIRONMENTAL DATA*//
0597      >          1X*3 -> STORE BOTH THE GENERAL MINE DESCRIPTION AND*/
0598      >          1X*          THE ENVIRONMENTAL DATA*//
0599      >          1X*4 -> STORE THE CURRENT EXPECTATION OF SUCCESS*1X
0600      >*VALUES*///
0601      >          1X*ENTER YOUR SELECTION -> _*)
0602  C
0603  1011 FORMAT(1X*-----*/
0604      >          1X* DATA ANALYSIS */
0605      >          1X*-----*/
0606      >          1X*0 -> EXIT FROM DATA ANALYSIS OPTION*//,
0607      >          1X*1 -> ENVIRONMENTAL FEASIBILITY RANKINGS*//,
0608      >          1X*2 -> TECHNIQUES AND ECONOMICS ANALYSIS*//,
0609      >          1X*3 -> OPTIMUM USE FACTORS*///
0610      >          1X*ENTER YOUR SELECTION -> _*)
0611  C
0612  1012 FORMAT(1X*-----*/
0613      >          1X* GRADE SPOILS WITHOUT*/
0614      >          1X* LAND USE OPTION RESTRICTIONS*/

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0615      >      1X'-----'//
0616      >      1X'0 -> EXIT FROM GRADE SPOILS OPTION'//
0617      >      1X'1 -> DRAGLINE - OPENING CUT OPTION'//
0618      >      1X'2 -> DRAGLINE - MINE RUN OPTION'//
0619      >      1X'3 -> DRAGLINE - FINAL CUT OPTION'//
0620      >      1X'4 -> TRUCK AND SHOVEL - OPENING CUT OPTION'//
0621      >      1X'5 -> TRUCK AND SHOVEL - MINE RUN OPTION'//
0622      >      1X'6 -> TRUCK AND SHOVEL - FINAL CUT OPTION'///
0623      >      1X'ENTER YOUR SELECTION -> _')
0624      C
0625      1013 FORMAT(1X'SORRY,I CAN'T SEEM TO GET ORGANIZED TODAY.'/
0626      >      1X'TRY ME SOME OTHER TIME.')
0627      C
0628      1020 FORMAT(1X'INPUT TITLE -> _')
0629      C
0630      1021 FORMAT(40A2)
0631      C
0632      1022 FORMAT(' ENTER THE COST OF GRADING SPOILS(CENTS / CU YD) -> _')
0633      END
0634      END$

```



&ALTRN T=00004 IS ON CR00015 USING 00002 BLKS R=0000

0001 FTN4

0002 C LABEL COMMON ALTRN (ALTERNATIVE HEADINGS)

0003 BLOCK DATA ALTRN

0004 COMMON /ALTRN/ ALTN

0005 INTEGER ALTN(6,4)

0006 DATA ALTN/2HCR,2HNA,2HWI,2HWA,2HHI,2HOT,2HOP,2HT.,2HLD,2HT.,2HGH,

0007 \* 2HHE,2HLA,2HVE,2HLI,2HRE,2H U,2HR ,2HND,2HG.,2HFE,2HC.,2HSE,2H /

0008 END

0009 END\$

&ANIMA T=00004 IS ON CR00015 USING 00039 BLKS R=0272

0001 FTM4  
0002 SUBROUTINE ANIMA  
0003 C FULL DISPLAY--CATEGORY 9 / ANIMALS  
0004 C  
0005 C LEVEL 2  
0006 C  
0007 C ANIMA IS ACCESSED BY EIFD TO SCHEDULE INPUTS AND EDITS TO  
0008 C CATEGORY VALUES, AND EDITS TO EXPECTATION OF SUCCESS VALUES  
0009 C FOR CATEGORY 9 - ANIMALS, USING FULL DISPLAY.  
0010 C  
0011 C THE CALLING SEQUENCE IS : CALL ANIMA  
0012 C  
0013 C ANIMA USES THE TCS ROUTINES : ERASE AND HOME  
0014 C  
0015 C THE LOCAL VARIABLES ARE :  
0016 C IANS -> ANSWER CELL  
0017 C II -> 'I' INDEX [ (I,J) ] TO CLIMAT ARRAY  
0018 C IOLD -> PRE-EDIT CATEGORY RESPONSE VALUE  
0019 C LUORN -> LAND USE OPTION REFERENCE NUMBER :  
0020 C 1 -> CROPLAND  
0021 C 2 -> NATIVE VEGETATION  
0022 C 3 -> WILDLIFE  
0023 C 4 -> WATER RECREATION  
0024 C 5 -> HIGH USE  
0025 C 6 -> OTHER  
0026 C NN -> HEADING NUMBER  
0027 C  
0028 C ANIMA IS SWAPPED IN BY PROGRAM ANIMX  
0029 C  
0030 C THIS ROUTINE WAS WRITTEN BY GREEN  
0031 C  
0032 C \*\*\*\*\* CLAIM RELEASE 1.0 - APRIL 1, 1980 \*\*\*\*\*  
0033 C  
0034 C  
0035 C TEKTRONIX COMMON  
0036 C  
0037 C COMMON ITEX (45)  
0038 C  
0039 C LOGICAL UNITS AND COMMON LOCATION  
0040 C  
0041 C COMMON IARY(5),IARY2(5),LER,LUF,LUL  
0042 C  
0043 C POINTERS  
0044 C  
0045 C COMMON EXIT ,IANM(3),ICLI(2),IGEN(3),IGRW(5)  
0046 C COMMON IOPTN ,IOVR(7),IPNTR ,ISOC(6),ISUB(8)  
0047 C COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT ,LUO  
0048 C COMMON MODE ,NANM ,NCLI ,NGEN ,NGRW  
0049 C COMMON NOVR ,NSECTS ,NSOC ,NSUB ,NSUR  
0050 C COMMON NTOP ,NU ,NVEG  
0051 C  
0052 C GRADING PARAMETERS  
0053 C  
0054 C COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCFA(5)



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0055      COMMON GRDVB(5),HWHT(5,10),HWSLI(5,10),NSPP(5),PCEQ19(4)
0056      COMMON PERCNT(5,10),REHCPY(5),REHVOL(5),SLOPE(5,10),WBF
0057      C
0058      C      CATEGORY TEXT
0059      C
0060      COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0061      COMMON OVRD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0062      COMMON TPSL(49,13),VGTA(15,13)
0063      C
0064      C      EXPECTATION VALUES
0065      C
0066      COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0067      COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0068      COMMON TOPSOI(33,6),VEGETA(10,6)
0069      C
0070      C      CATEGORY RESPONSES
0071      C
0072      COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0073      COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0074      COMMON RTOPSO(9),RVEGET(2)
0075      C
0076      C      FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0077      C
0078      COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CAHBM
0079      COMMON CABS(2),CAC,CACP,CADF,CAUH
0080      COMMON CADS,CAEAF,CAHSAP,CAHSTS,CA1P
0081      COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0082      COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0083      COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0084      C
0085      INTEGER EXIT,CLMA,GDES,GWHY,OVRD,SBSL
0086      INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0087      INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0088      INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0089      INTEGER VEGETA,ANIMAL
0090      INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0091      INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0092      INTEGER RCLTEC,TTL
0093      C
0094      INTEGER COMMON (1)
0095      EQUIVALENCE (COMMON (1), ITEK (1))
0096      EQUIVALENCE (IARY (1), LUT)
0097      EQUIVALENCE (IARY2 (1), ISTRK)
0098      EQUIVALENCE (IARY2 (2), ISECT)
0099      EQUIVALENCE (IARY2 (3), ICODE)
0100      EQUIVALENCE (IARY2 (4), LEN)
0101      C
0102      LOGICAL LER
0103      C
0104      C =====
0105      C
0106      C      DISPLAY MODE
0107      1      IF(.NOT.LER) GOTO 5
0108      CALL ERASE
0109      CALL HOME
0110      5 GOTO(10,20,30) MODE

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0111      10 WRITE(LUT,1010)
0112      GOTO 40
0113      20 WRITE(LUT,2010)
0114      GOTO 40
0115      30 WRITE(LUT,3010)
0116      40 IF( MODE.GT.1) GOTO 50
0117      GOTO(100,200,300) LEXIT
0118 C      USER INPUT -> EDIT HEADING
0119      50 WRITE(LUT,2020)
0120      51 READ (LUT,2030) IANS
0121          IF(IANS.EQ.2HA ) GOTO 100
0122          IF(IANS.EQ.2HB ) GOTO 200
0123          IF(IANS.EQ.2HC ) GOTO 300
0124          IF(IANS.EQ.2HNO) RETURN
0125      WRITE(LUT,1200)
0126      GOTO 51
0127 C      EDIT EXPECTATIONS
0128 C      USER INPUT -> SUBHEADING NUMBER
0129      52 WRITE(LUT,3020)
0130      57 READ (LUT,*) II
0131      GOTO 85
0132 C      USER INPUT -> LAND USE OPTION REFERENCE NUMBER
0133      54 WRITE(LUT,3030)
0134      55 READ (LUT,*) LUO
0135          IF(LUO.GE.1.AND.LUO.LE.6) GOTO 56
0136      WRITE(LUT,1200)
0137      GOTO 55
0138      56 II=II+L
0139 C      USER INPUT -> EXPECTATION VALUE
0140      58 WRITE(LUT,3040)
0141      59 READ (LUT,*) ANIMAL(II,LUO)
0142          IF(ANIMAL(II,LUO).GE.0.AND.ANIMAL(II,LUO).LE.4)
0143      + GOTO 600
0144      WRITE(LUT,3050)
0145      GOTO 59
0146 C      EDIT RESPONSES
0147      60 IOLD = RANIMA(NN)
0148      65 WRITE(LUT,2040) IOLD
0149      GOTO 83
0150 C      INPUT RESPONSES
0151 C      USER INPUT -> RANIMA(NN)
0152      70 WRITE(LUT,2000)
0153      83 READ (LUT,*) RANIMA(NN)
0154          IF(RANIMA(NN).EQ.0) GOTO(900,87) MODE
0155      II=RANIMA(NN)
0156      85 IF(II.GE.1.AND.II.LE.IANM(NN)) GOTO(700,600,54) MODE
0157      87 WRITE(LUT,1200)
0158      GOTO(83,83,57) MODE
0159 C      DISPLAY HEADING A -> WILDLIFE TYPES
0160      100 NN=1
0161          J=1
0162          L=0
0163          IF(MODE.NE.1.AND.LER) CALL ERASE
0164          IF(MODE.NE.1.AND.LER) CALL HOME
0165      105 WRITE(LUT,1000) (ANIM(1,I),I=1,13)
0166      WRITE(LUT,1020)

```



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0167      WRITE(LUT,1050) ((ANIM(K,I),I=1,13),K=2,4)
0168      WRITE(LUT,1100) (ANIM(5,1),I=1,13),(ANIMAL(1,I),I=1,6)
0169      WRITE(LUT,1050) (ANIM(6,I),I=1,13)
0170      WRITE(LUT,1100) (ANIM(7,I),I=1,13),(ANIMAL(2,I),I=1,6)
0171      WRITE(LUT,1050) (ANIM(8,I),I=1,13)
0172      WRITE(LUT,1100) (ANIM(9,I),I=1,13),(ANIMAL(3,I),I=1,6)
0173      WRITE(LUT,1050) ((ANIM(K,I),I=1,13),K=10,12)
0174      WRITE(LUT,1100) (ANIM(13,I),I=1,13),(ANIMAL(4,I),I=1,6)
0175      WRITE(LUT,1050) (ANIM(14,I),I=1,13)
0176      WRITE(LUT,1100) (ANIM(15,I),I=1,13), (ANIMAL(5,I),I=1,6)
0177      WRITE(LUT,1050) (ANIM(22,I),I=1,13)
0178      WRITE(LUT,1100) (ANIM(23,I),I=1,13),(ANIMAL(6,I),I=1,6)
0179      110 GOTO(70,60,52) MODE
0180      C          DISPLAY HEADING B -> CURRENT SECONDARY TYPES
0181      200 NN = 2
0182      J=IANM(1)+1
0183      L=J-1
0184      IF(.NOT.LER) GOTO 205
0185      CALL ERASE
0186      CALL HOME
0187      WRITE(LUT,1000) (ANIM(1,I),I=1,13)
0188      205 WRITE(LUT,1020)
0189      WRITE(LUT,1050) ((ANIM(K,I),I=1,13),K=20,21)
0190      WRITE(LUT,1050) (ANIM(4,I),I=1,13)
0191      WRITE(LUT,1100) (ANIM(5,I),I=1,13),(ANIMAL(7,I),I=1,6)
0192      WRITE(LUT,1050) (ANIM(6,I),I=1,13)
0193      WRITE(LUT,1100) (ANIM(7,I),I=1,13),(ANIMAL(8,I),I=1,6)
0194      WRITE(LUT,1050) (ANIM(8,I),I=1,13)
0195      WRITE(LUT,1100) (ANIM(9,I),I=1,13),(ANIMAL(9,I),I=1,6)
0196      WRITE(LUT,1050) ((ANIM(K,I),I=1,13),K=10,12)
0197      WRITE(LUT,1100) (ANIM(13,I),I=1,13),(ANIMAL(10,I),I=1,6)
0198      KK=5
0199      WRITE(LUT,1051) KK,(ANIM(22,I),I=3,13)
0200      WRITE(LUT,1100) (ANIM(23,I),I=1,13),(ANIMAL(11,I),I=1,6)
0201      GOTO(70,60,52) MODE
0202      C          DISPLAY HEADING C -> LIVESTOCK GRAZING
0203      300 NN=3
0204      J=IANM(1)+IANM(2)+1
0205      L=J-1
0206      IF(.NOT.LER) GOTO 305
0207      CALL ERASE
0208      CALL HOME
0209      WRITE(LUT,1000) (ANIM(1,I),I=1,13)
0210      305 WRITE(LUT,1020)
0211      WRITE(LUT,1050) ((ANIM(K,I),I=1,13),K=16,17)
0212      DO 310 K=18,19
0213      WRITE(LUT,1100) (ANIM(K,I),I=1,13),(ANIMAL(J,I),I=1,6)
0214      310 J=J+1
0215      GOTO(70,60,52) MODE
0216      C          USER INPUT -> MORE EDITS ?
0217      600 WRITE(LUT,3060)
0218      READ (LUT,2030) IANS
0219      IF(IANS.NE.2HYES) RETURN
0220      GOTO 1
0221      C          INPUT MODE -> DIRECT TO PROPER HEADING
0222      700      IF(NN.EQ.NANM) RETURN

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```

0223      GOTO (200,300) NN
0224 C      USER WANTS OUT -> SET EXIT TO ZERO AND RETURN
0225      900 EXIT = 0
0226      RETURN
0227 C      FORMAT STATEMENTS
0228      1000 FORMAT(13A2,44 ('*'),/,26X,*,
0229      &10X,"STANDARD EXPECTATIONS",11X,*,/,
0230      &26X,44 ('*'),/,26X,"*CROP*",2X,
0231      &"NATIVE",2X,"*WILD*",2X,"WATER",3X,
0232      &"*HIGH*OTHER*",/,26X,
0233      &"*LAND*VEGETATION*LIFE*RECREATION*USE *",5X,*)
0234 C
0235      1020 FORMAT(70 ('*'),/,26X,"*4X*"10X*"4X*"10X*"4X*"5X*")
0236 C
0237      1050 FORMAT(13A2,
0238      &"",4X,"",10X,"",4X,"",10X,"",4X,"",5X,*)
0239 C
0240      1051 FORMAT(2X,I2,11A2,
0241      &"",4X,"",10X,"",4X,"",10X,"",4X,"",5X,*)
0242 C
0243      1100 FORMAT(13A2,
0244      &"* "I1" * "11" * "I1" * "I1" * "I1" * "I1" * "I1" *")
0245 C
0246      1200 FORMAT (/,"YOU HAVE TYPED IN AN ILLEGAL ANSWER.",
0247      &/, "GIVE HER ANOTHER SHOT -> _")
0248 C
0249      2000 FORMAT("ENTER THE APPROPRIATE",5X,
0250      &44 ('*'),/, "NUMBER, OR ZERO TO QUIT -> _")
0251 C
0252      1010 FORMAT(17X"INPUT RESPONSES/ANIMALS"/)
0253 C
0254      2010 FORMAT(17X"EDIT RESPONSES/ANIMALS"/)
0255 C
0256      3010 FORMAT(17X"EDIT EXPECTATIONS/ANIMALS"/)
0257 C
0258      2020 FORMAT(5X"IN WHICH HEADING IS YOUR DESIRED EDIT?"/,
0259      &5X" (ENTER A,B,C, OR NONE) -> _")
0260 C
0261      2030 FORMAT(A2)
0262 C
0263      2040 FORMAT(5X"YOUR CURRENT RESPONSE IS ->"I2,/,
0264      &5X"ENTER YOUR NEW RESPONSE HERE -> _")
0265 C
0266      3020 FORMAT(5X"IN WHICH SUB-HEADING IS THE EXPECTATION VALUE"/,
0267      &5X"YOU WISH TO CHANGE? (ENTER THE APPROPRIATE NUMBER)-> _")
0268 C
0269      3030 FORMAT(/5X"SELECT THE LAND USE OPTION YOU WISH TO CHANGE"/
0270      > 1X" -1- / -2- / -3- / -4- / -5- / -6- /"/
0271      > 1X"CROPLAND/NAT.VEG./WILDLIFE/WAT.REC./HIGH USE/ OTHER/"
0272      >/5X"ENTER YOUR SELECTION HERE -> _")
0273 C
0274      3040 FORMAT(5X"ENTER YOUR NEW EXPECTATION VALUE HERE -> _")
0275 C
0276      3050 FORMAT (/, 5X"ERROR--> YOUR EXPECTATION VALUE MUST BE"/,
0277      &5X"0,1,2,3, OR 4 TO AVOID INTRODUCING A BIAS -> _")
0278 C

```

0279 3060 FORMAT(5X'ANY MORE EDITS TO ANIMALS ?'  
0280 &5X' (YES OR NO) -> \_')  
0281 C  
0282 END  
0283 END\$

/5



2AXES T=00004 IS ON CR00015 USING 00018 BLKS R=0015

```
0001 FTN4
0002 SUBROUTINE AXES (IX,IY,XMIN)
0003 C
0004 C LEVEL 5
0005 C
0006 C SUBROUTINE AXES IS ACCESSED BY GRAFS TO DRAW THE AXES FOR
0007 C THE DRAGLINE GRAPHS
0008 C
0009 C THE CALLING SEQUENCE IS:
0010 C
0011 C CALL AXES (IX,IY,XMIN)
0012 C
0013 C WHERE
0014 C
0015 C IX IS THE ABSOLUTE X SCREEN COORDINATE OF THE GRAPH'S ORIGIN
0016 C IY IS THE ABSOLUTE Y SCREEN COORDINATE OF THE GRAPH'S ORIGIN
0017 C XMIN IS THE MINIMUM X VALUE TO BE DISPLAYED
0018 C
0019 C AXES USES THE TCS ROUTINES : ANMOD,DRAWA,DRWRL,MOVAB,
0020 C MOVEA, AND MOVRL
0021 C AND DECLARES LABEL COMMON TABLE.
0022 C
0023 C THIS ROUTINE WAS WRITTEN BY EASTMAN/GREEN
0024 C
0025 C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0026 C
0027 C =====
0028 C
0029 C TEKTRONIX COMMON
0030 C
0031 COMMON ITEK (45)
0032 C
0033 C LOGICAL UNITS AND COMMON LOCATION
0034 C
0035 COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0036 C
0037 C POINTERS
0038 C
0039 COMMON EXIT ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0040 COMMON IOPTN ,IOVR(7),IPNTR ,ISOC(6),ISUB(8)
0041 COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT ,LUO
0042 COMMON MODE ,NANM ,NCLI ,NGEN ,NGRW
0043 COMMON NOVR ,NSECTS ,NSOC ,NSUB ,NSUR
0044 COMMON NTOP ,NU ,NVEG
0045 C
0046 C GRADING PARAMETERS
0047 C
0048 COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCPA(5)
0049 COMMON GRDVRB(5),HWHT(5,10),HWSLI(5,10),NSPP(5),PCEQ19(4)
0050 COMMON PERCNT(5,10),REHCPY(5),REHVOL(5),SLOPE(5,10),WBF
0051 C
0052 C CATEGORY TEXT
0053 C
0054 COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
```

```

0055      COMMON OVRD(11,13),SBSL(13), SCEC(33,13),SWHY(44,13)
0056      COMMON TPSL(49,13),VGTA(15,13)
0057      C
0058      C      EXPECTATION VALUES
0059      C
0060      COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0061      COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0062      COMMON TOPSOI(33,6),VEGETA(10,6)
0063      C
0064      C      CATEGORY RESPONSES
0065      C
0066      COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0067      COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0068      COMMON RTOPSO(9),RVEGET(2)
0069      C
0070      C      FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0071      C
0072      COMMON CAAHM,CABAH,CABFN(3),CABFF(3),CABHM
0073      COMMON CABS(2),CAC,CACP,CAUF,CADH
0074      COMMON CADS,CAEAF,CAHSAF,CAHSTS,CAIF
0075      COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0076      COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0077      COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0078      C
0079      INTEGER EXIT,CLMA,GDES,GWHY,OVRD,SBSL
0080      INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0081      INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0082      INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0083      INTEGER VEGETA,ANIMAL
0084      INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0085      INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0086      INTEGER RCLTEC,TTL
0087      C
0088      INTEGER COMMON (1)
0089      EQUIVALENCE (COMMON (1), ITEK (1))
0090      EQUIVALENCE (IARRY (1), LUT)
0091      EQUIVALENCE (IARY2 (1), ISTRK)
0092      EQUIVALENCE (IARY2 (2), ISECT)
0093      EQUIVALENCE (IARY2 (3), ICODE)
0094      EQUIVALENCE (IARY2 (4), LEN)
0095      C
0096      LOGICAL LER
0097      C
0098      C =====
0099      C
0100      COMMON /TABLE/
0101      >      TBLV, TBLT, TELA, TELS, JCOUNT, TSMIN, KODE,
0102      >      TSMAX, TVMIN, TVMAX, TAMIN, TAMAX, TTMIN, TTMAX
0103      C
0104      DIMENSION TBLV(12),TBLT(12),TELA(12),TELS(12)
0105      C
0106      LUD = IARRY(3)
0107      C
0108      CALL MOVAB(IX,IY)
0109      DO 100 I=1,10
0110      CALL BRWRL(30,0)

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```

0111      CALL MOVRL(0,-5)
0112      CALL DRWRL(0,10)
0113      100 CALL MOVRL(0,-5)
0114      CALL MOVAB(IX,IY)
0115      DO 200 I=1,JCOUNT
0116      CALL DRAWA(XMIN ,TBLS(1))
0117      CALL MOVRL(5 ,0 )
0118      CALL DRWRL(-10,0 )
0119      CALL MOVRL(-75 ,-3)
0120      CALL ANMOD
0121      WRITE(LUD,1010)  TBLS(I)
0122      1010 FORMAT(F5.1)
0123      CALL MOVEA(XMIN,TBLS(1))
0124      200 CONTINUE
0125      C
0126      CALL MOVAB(IX+5,IY+310)
0127      CALL ANMOD
0128      WRITE(LUD,1020)
0129      1020 FORMAT("FINAL SLOPE (DEGREES)")
0130      CALL MOVAB(IX-25,IY-20)
0131      CALL ANMOD
0132      ZERO=0.
0133      IF(XMIN.NE.0.) WRITE(LUD,1030) XMIN
0134      IF(XMIN.EQ.0.) WRITE(LUD,1031) ZERO
0135      1030 FORMAT(F9.2)
0136      1031 FORMAT(F3.1)
0137      RETURN
0138      END
0139      END$

```



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0001  FTN4
0002                      SUBROUTINE BUILD
0003  C
0004  C LEVEL 4
0005  C
0006  C BUILD IS ACCESSED BY DLRE TO BUILD TABLES
0007  C OF THE DRAGLINE FINAL SLOPE RELATIONSHIPS.
0008  C
0009  C THE CALLING SEQUENCE IS :      CALL BUILD
0010  C
0011  C SUBROUTINES SCHEDULED BY BUILD ARE:
0012  C
0013  C      DLGCO  TO COMPUTE THE VOLUMES AND COSTS OF GRADING FOR THE
0014  C              OPENING CUT OPTION
0015  C      DLGCM  TO COMPUTE THE VOLUMES AND COSTS OF GRADING FOR THE
0016  C              MINE RUN OPTION
0017  C      DLGCF  TO COMPUTE THE VOLUMES AND COSTS OF GRADING FOR THE
0018  C              FINAL CUT OPTION
0019  C      MNMXF  TO DETERMINE THE MINIMUM AND MAXIMUM FINAL SLOPE VALUES
0020  C
0021  C BUILD USES THE TCS ROUTINES : BELL AND TINPT
0022  C
0023  C THE LOCAL VARIABLES ARE:
0024  C
0025  C "CPAC"  - THE COST PER ACRE (DOLLARS/ACRE)
0026  C "CST"   - COST OF GRADING (DOLLARS)
0027  C "ICHAR" - TINPT RETURN CELL
0028  C "IPASS" - SET TO ZERO FOR FIRST PASS, ONE FOR FINAL PASS
0029  C "KCODE" - AS DEFINED IN MNMXF
0030  C "SLOPEJ" - FINAL SLOPE VALUE (IN DEGREES)
0031  C "SLPINT" - SLOPE INTERVAL (IN DEGREES)
0032  C "TLSE"  - HYPOTHETICAL TOTAL LENGTH OF MINE RUN SPOILS (IN FEET)
0033  C "VOL"    - VOLUME GRADED (IN CUBIC YARDS)
0034  C "WID"    - WIDTH OF THE FINAL SPOIL BANK FOR THE OPENING CUT
0035  C              IN FEET.
0036  C
0037  C THIS ROUTINE WAS WRITTEN BY EASTMAN/GREEN
0038  C
0039  C ***** CLAIM RELEASE 1.0 -- APRIL 1, 1980 *****
0040  C
0041  C =====
0042  C
0043  C      TEKTRONIX COMMON
0044  C
0045  C      COMMON ITEK (45)
0046  C
0047  C      LOGICAL UNITS AND COMMON LOCATION
0048  C
0049  C      COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0050  C
0051  C      POINTERS
0052  C
0053  C      COMMON EXIT      ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0054  C      COMMON IOPTN     ,IOVR(7),IPNTR ,ISOC(6),ISUB(8)

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0055      COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT ,LUO
0056      COMMON MODE ,NANM ,NCLI ,NGEN ,NGRW
0057      COMMON NOVR ,NSECTS ,NSDC ,NSUB ,NSUR
0058      COMMON NTOP ,NU ,NVEG
0059 C
0060 C      GRADING PARAMETERS
0061 C
0062      COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCPA(5)
0063      COMMON GRDUBS(5),HWHT(5,10),HWSLI(5,10),NSFP(5),PCEQ19(4)
0064      COMMON PERCNT(5,10),REHCPY(5),REHVOL(5),SLOPE(5,10),WBF
0065 C
0066 C      CATEGORY TEXT
0067 C
0068      COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0069      COMMON OVRD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0070      COMMON TPSL(49,13),VGTA(15,13)
0071 C
0072 C      EXPECTATION VALUES
0073 C
0074      COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0075      COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0076      COMMON TOPSOI(33,6),VEGETA(10,6)
0077 C
0078 C      CATEGORY RESPONSES
0079 C
0080      COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0081      COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0082      COMMON RTOPSO(9),RVEGET(2)
0083 C
0084 C      FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0085 C
0086      COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHM
0087      COMMON CABS(2),CAC,CACP,CADF,CADH
0088      COMMON CADS,CAEAF,CAHSAF,CAHSTS,CAIF
0089      COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0090      COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0091      COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0092 C
0093      INTEGER EXIT,CLMA,GDES,GWHY,OVRD,SBSL
0094      INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0095      INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0096      INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0097      INTEGER VEGETA,ANIMAL
0098      INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0099      INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0100      INTEGER RCLTEC,TTL
0101 C
0102      INTEGER COMMON (1)
0103      EQUIVALENCE (COMMON (1), ITEK (1))
0104      EQUIVALENCE (IARRY (1), LUT)
0105      EQUIVALENCE (IARY2 (1), ISTRK)
0106      EQUIVALENCE (IARY2 (2), ISECT)
0107      EQUIVALENCE (IARY2 (3), ICODE)
0108      EQUIVALENCE (IARY2 (4), LEN)
0109 C
0110      LOGICAL LER

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0111 C
0112 C =====
0113 C
0114 C
0115 COMMON /TABLE/
0116 > TBLV, TBLT, TBLA, TBLs, JCOUNT, TSMIN, KCODE,
0117 > TSMAX, TVMIN, TVMAX, TAMIN, TAMAX, TTMIN, TTMAX
0118 C
0119 DIMENSION TBLV(12), TBLT(12), TBLA(12), TBLs(12)
0120 C
0121 IPASS=0
0122 C DETERMINE THE MINIMUM AND MAXIMUM FINAL SLOPE VALUE
0123 KCODE=1
0124 CALL MNMXF(LUT, MODE, RGENDE(2), GRDVBS, TSMAX, TSMIN, KCODE)
0125 IF(KCODE.NE.3) GOTO 10
0126 IF(LE) CALL BELL
0127 IF(LE) WRITE(LUT, 37)
0128 IF(LE) CALL TINPT(ICHAR)
0129 IPNTR=KCODE
0130 RETURN
0131 C DETERMINE THE SLOPE INTERVAL AND SET ABSOLUTES
0132 10 SLPINT = FLOAT ( IFIX (TSMAX-TSMIN)) / 10.
0133 IF(SLPINT.LT.0.1) SLPINT = 0.1
0134 TVMAX = 0.
0135 TTMAX = 0.
0136 TAMAX = 0.
0137 TVMIN = 1.0E36
0138 TTMIN = 1.0E36
0139 TAMIN = 1.0E36
0140 C COMPUTE THE VALUES
0141 JCOUNT = 0
0142 SLOPJ = TSMIN + .01
0143 50 JCOUNT = JCOUNT + 1
0144 GOTO (100, 200, 300) RGENDE(2)
0145 100 CALL DLGCO (SLOPJ, 100., VOL, CST, CPAC, GRDVBS, COGO, WID)
0146 GOTO 400
0147 200 CALL DLGCM (SLOPJ, 100., VOL, CST, TLSB, GRDVBS, COGO)
0148 GOTO 400
0149 300 CALL DLGCF (SLOPJ, 100., WBF, GRDVBS, COGO, VOL, CST, ACRES)
0150 400 IF(TBLV(JCOUNT).GT.TVMAX) TVMAX=TBLV(JCOUNT)
0151 IF(TBLV(JCOUNT).LT.TVMIN) TVMIN=TBLV(JCOUNT)
0152 IF(TBLT(JCOUNT).GT.TTMAX) TTMAX=TBLT(JCOUNT)
0153 IF(TBLT(JCOUNT).LT.TTMIN) TTMIN=TBLT(JCOUNT)
0154 IF(TBLA(JCOUNT).GT.TAMAX) TAMAX=TBLA(JCOUNT)
0155 IF(TBLA(JCOUNT).LT.TAMIN) TAMIN=TBLA(JCOUNT)
0156 SLOPJ = SLOPJ + SLPINT
0157 IF(SLOPJ.LE.TSMAX-SLPINT+.1) GOTO 50
0158 IF(IPASS.EQ.1) RETURN
0159 IPASS=1
0160 SLOPJ=TSMAX
0161 GOTO 50
0162 37 FORMAT(/5X'HIT THE RETURN KEY TO CONTINUE...')
0163 END
0164 END*

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```

0001  FTN4
0002          SUBROUTINE CAT10
0003  C      ABBREVIATED DISPLAY--CATEGORY 10 / SOCIO-ECONOMICS
0004  C
0005  C LEVEL 2
0006  C
0007  C CAT10 IS ACCESSED BY E1AD TO SCHEDULE INPUTS TO THE CATEGORY
0008  C RESPONSES IN CATEGORY X - SOCIO-ECONOMICS, USING ABBREVIATED DISPLAY
0009  C
0010  C THE CALLING SEQUENCE IS :      CALL CAT10
0011  C
0012  C
0013  C THIS ROUTINE WAS WRITTEN BY EASTMAN AND MODIFIED BY GREEN
0014  C
0015  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0016  C =====
0017  C
0018  C      TEKTRONIX COMMON
0019  C
0020  C      COMMON ITEK (45)
0021  C
0022  C      LOGICAL UNITS AND COMMON LOCATION
0023  C
0024  C      COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0025  C
0026  C      POINTERS
0027  C
0028  C      COMMON EXIT      ,IANM(3),ICL1(2),IGEN(3),IGRW(5)
0029  C      COMMON IOPTN     ,IOVR(7),IPNTR  ,ISOC(6),ISUB(8)
0030  C      COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT  ,LUO
0031  C      COMMON MODE      ,NANM      ,NCLI      ,NGEN      ,NGRW
0032  C      COMMON NOVR      ,NSECTS    ,NSOC      ,NSUB      ,NSUR
0033  C      COMMON N1OP      ,NU        ,NVEG
0034  C
0035  C      GRADING PARAMETERS
0036  C
0037  C      COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCFA(5)
0038  C      COMMON GROVBS(5),HWHT(5,10),HWSL1(5,10),NSPP(5),PCEQ19(4)
0039  C      COMMON PERCNT(5,10),REHCPY(5),REHVOL(5),SLOPE(5,10),WBP
0040  C
0041  C      CATEGORY TEXT
0042  C
0043  C      COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0044  C      COMMON OVRD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0045  C      COMMON TPSL(49,13),VGTA(15,13)
0046  C
0047  C      EXPECTATION VALUES
0048  C
0049  C      COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0050  C      COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0051  C      COMMON TOPSOI(33,6),VEGETA(10,6)
0052  C
0053  C      CATEGORY RESPONSES
0054  C

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0055      COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0056      COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0057      COMMON RTOPSO(9),RVEGET(2)
0058  C
0059  C      FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0060  C
0061      COMMON CAAHM,CABAH,CABFN(3),CABFF(3),CABHM
0062      COMMON CABS(2),CAC,CACF,CADF,CADH
0063      COMMON CADS,CAEAF,CAHSAF,CAHSTS,CAIF
0064      COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0065      COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0066      COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0067  C
0068      INTEGER EXIT,CLMA,GDES,GWHY,OVRBD,SBSL
0069      INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0070      INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0071      INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0072      INTEGER VEGETA,ANIMAL
0073      INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0074      INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0075      INTEGER RCLTEC,TTL
0076  C
0077      INTEGER COMMON (1)
0078      EQUIVALENCE (COMMON (1), ITEK (1))
0079      EQUIVALENCE (IARY (1), LUT)
0080      EQUIVALENCE (IARY2 (1), ISTRK)
0081      EQUIVALENCE (IARY2 (2), ISECT)
0082      EQUIVALENCE (IARY2 (3), ICODE)
0083      EQUIVALENCE (IARY2 (4), LEN)
0084  C
0085      LOGICAL LER
0086  C
0087  C      OUTPUT HEADING
0088      WRITE (LUT,1000) (SCEC (1,J), J = 1,13)
0089      GOTO (10,20,30,40,50,60) LEXIT
0090  C      USER INPUT -> ARCHAEOLOGIC SITES
0091  10 WRITE (LUT,1050) (( SCEC (1,J), J = 1,13), I = 2,4)
0092      READ (LUT,*) RSOCEC (1)
0093      IF (RSOCEC (1).EQ.0) RETURN
0094      IF (RSOCEC (1).GE.1.AND.RSOCEC (1).LE.ISOC (1)) GOTO 20
0095      WRITE (LUT,1015) RSOCEC (1)
0096      GOTO 10
0097  C      USER INPUT -> PRESENT LAND USE
0098  20 WRITE (LUT,1020) (( SCEC (I,J), J = 1,13), I = 7,8)
0099      READ (LUT,*) RSOCEC (2)
0100      IF (RSOCEC (2).EQ.0) RETURN
0101      IF (RSOCEC (2).GE.1.AND.RSOCEC (2).LE.ISOC (2)) GOTO 30
0102      WRITE (LUT,1015) RSOCEC (2)
0103      GOTO 20
0104  C      USER INPUT -> SECONDARY LAND USE
0105  30 WRITE (LUT,1010) (SCEC (17,J), J = 1,13)
0106      READ (LUT,*) RSOCEC (3)
0107      IF (RSOCEC (3).EQ.0) RETURN
0108      IF (RSOCEC (3).GE.1.AND.RSOCEC (3).LE.ISOC (3)) GOTO 40
0109      WRITE (LUT,1015) RSOCEC (3)
0110      GOTO 30

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0111 C          USER INPUT -> FUTURE LAND USE DESIRE OF OWNER
0112 40 WRITE (LUT,1050) ((SCEC (I,J), J = 1,13), I = 24,26)
0113 READ (LUT,*) RSOCEC (4)
0114 IF (RSOCEC (4).EQ.0) RETURN
0115 IF (RSOCEC (4).GE.1.AND.RSOCEC (4).LE.ISOC (4)) GOTO 50
0116 WRITE (LUT,1015) RSOCEC (4)
0117 GOTO 40
0118 C          USER INPUT -> FUTURE LAND USE DESIRE OF COMMUNITY
0119 50 WRITE (LUT,1050) (( SCEC (I,J), J = 1,13), I = 27,29)
0120 READ (LUT,*) RSOCEC (5)
0121 IF (RSOCEC (5).EQ.0) RETURN
0122 IF (RSOCEC (5).GE.1.AND.RSOCEC (5).LE.ISOC (5)) GOTO 60
0123 WRITE (LUT,1015) RSOCEC (5)
0124 GOTO 50
0125 C          USER INPUT -> FUTURE LAND USE DESIRE OF GOVERNMENT
0126 60 WRITE (LUT,1060) (( SCEC (I,J), J = 1,13), I = 30,33)
0127 READ (LUT,*) RSOCEC (6)
0128 IF (RSOCEC (6).GE.0.AND.RSOCEC (6).LE.ISOC (6)) RETURN
0129 WRITE (LUT,1015) RSOCEC (6)
0130 GOTO 60
0131 C          FORMAT STATEMENTS
0132 1000 FORMAT (/5X,13A2)
0133 C
0134 1010 FORMAT (/5X,13A2" -> _")
0135 C
0136 1015 FORMAT (A2" ?? -> RE-INPUT.")
0137 C
0138 1020 FORMAT (/5X,13A2, /5X,13A2" -> _")
0139 C
0140 1050 FORMAT (2(/5X,13A2) ,/5X,13A2" -> _")
0141 C
0142 1060 FORMAT (3(/5X,13A2) ,/5X,13A2" -> _")
0143 C
0144 END
0145 END$

```



8CAT2 T=00004 IS ON CR00015 USING 00018 BLKS R=0000

```
0001 FTN4
0002 SUBROUTINE CAT2
0003 C ABBREVIATED DISPLAY--CATEGORY 2 / CLIMATOLOGY
0004 C
0005 C LEVEL 2
0006 C
0007 C CAT2 IS ACCESSED BY EIAH TO SCHEDULE INPUTS TO THE CATEGORY
0008 C RESPONSES IN CATEGORY II - CLIMATOLOGY, USING ABBREVIATED DISPLAY
0009 C
0010 C THE CALLING SEQUENCE IS : CALL CAT2
0011 C
0012 C THIS ROUTINE WAS WRITTEN BY EASTMAN AND MODIFIED BY GREEN
0013 C
0014 C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0015 C =====
0016 C
0017 C TEKTRONIX COMMON
0018 C
0019 C COMMON ITEK (45)
0020 C
0021 C LOGICAL UNITS AND COMMON LOCATION
0022 C
0023 C COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0024 C
0025 C POINTERS
0026 C
0027 C COMMON EXIT ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0028 C COMMON IOPTN ,IOVR(7),IFNTR ,ISOC(6),ISUB(8)
0029 C COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT ,LUD
0030 C COMMON MODE ,NANM ,NCLI ,NGEN ,NGRW
0031 C COMMON NOVR ,NSECTS ,NSOC ,NSUB ,NSUR
0032 C COMMON NTOP ,NU ,NVEG
0033 C
0034 C GRADING PARAMETERS
0035 C
0036 C COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCFA(5)
0037 C COMMON GROUVE(5),HWHT(5,10),HWSL1(5,10),NSPF(5),PCER19(4)
0038 C COMMON PERCNT(5,10),REHCFY(5),REHVOL(5),SLOPE(5,10),WBP
0039 C
0040 C CATEGORY TEXT
0041 C
0042 C COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0043 C COMMON OVRD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0044 C COMMON TPSL(49,13),VGTA(15,13)
0045 C
0046 C EXPECTATION VALUES
0047 C
0048 C COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0049 C COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0050 C COMMON TOPSOI(33,6),VEGETA(10,6)
0051 C
0052 C CATEGORY RESPONSES
0053 C
0054 C COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
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```

0055      COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0056      COMMON RTOPSO(9),RVEGET(2)
0057      C
0058      C      FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0059      C
0060      COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHM
0061      COMMON CABS(2),CAC,CACP,CADF,CADH
0062      COMMON CADS,CAEAF,CAHSAP,CAHSTS,CAIP
0063      COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0064      COMMON CSTRF,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0065      COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0066      C
0067      INTEGER EXIT,CLMA,GDES,GWHY,OVRBD,SBSL
0068      INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0069      INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0070      INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0071      INTEGER VEGETA,ANIMAL
0072      INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0073      INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0074      INTEGER RCLTEC,TTL
0075      C
0076      INTEGER COMMON (1)
0077      EQUIVALENCE (COMMON (1), ITEK (1))
0078      EQUIVALENCE (IARY (1), LUT)
0079      EQUIVALENCE (IARY2 (1), ISTRK)
0080      EQUIVALENCE (IARY2 (2), ISECT)
0081      EQUIVALENCE (IARY2 (3), ICODE)
0082      EQUIVALENCE (IARY2 (4), LEN)
0083      C
0084      LOGICAL LER
0085      C
0086      C      OUTPUT HEADING
0087      WRITE (LUT,1000) ( CLMA (1,J), J = 1, 13)
0088      GOTO (10,20) LEXIT
0089      C      USER INPUT -> ANNUAL PRECIPITATION
0090      10 WRITE (LUT,1020) (( CLMA (1,J), J = 1,13), I =2,3)
0091      READ (LUT,*) RCLIMA (1)
0092      IF (RCLIMA (1).EQ.0 ) GOTO 500
0093      IF (RCLIMA (1).GE.1.AND.RCLIMA (1).LE.ICLI (1)) GOTO 20
0094      WRITE (LUT,1015) RCLIMA (1)
0095      GOTO 10
0096      C      USER INPUT -> WIND VELOCITY
0097      20 WRITE (LUT,1020) (( CLMA (I,J), J = 1,13), I = 8,9)
0098      READ (LUT,*) RCLIMA (2)
0099      IF (RCLIMA (2).EQ.0) GOTO 500
0100      IF (RCLIMA (2).GE.1.AND.RCLIMA (2).LE.ICLI (2)) RETURN
0101      WRITE (LUT,1015) RCLIMA (2)
0102      GOTO 20
0103      C      USER WANTS OUT -> SET EXIT TO ZERO AND RETURN
0104      500 EXIT = 0
0105      RETURN
0106      C      FORMAT STATEMENTS
0107      1000 FORMAT (/5X,13A2)
0108      C
0109      1015 FORMAT (A2" ?? -> RE-INPUT.")
0110      C

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```
0111 1020 FORMAT (/5X,13A2/5X,13A2' -> _')
0112 C
0113 C
0114      END
0115 ENDD$
```

2CAT3 T=00004 IS ON C00015 USING 00030 BLKS R=0000

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0001 FTN4
0002 SUBROUTINE CAT3
0003 C ABBREVIATED DISPLAY--CATEGORY 3 / TOPSOIL
0004 C
0005 C LEVEL 2
0006 C
0007 C CAT3 IS ACCESSED BY EIAD TO SCHEDULE INPUTS TO THE CATEGORY
0008 C RESPONSES IN CATEGORY III - TOPSOIL, USING ABBREVIATED DISPLAY
0009 C
0010 C THE CALLING SEQUENCE IS : CALL CAT3
0011 C
0012 C THIS ROUTINE WAS WRITTEN BY EASTMAN AND MODIFIED BY GREEN
0013 C
0014 C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0015 C =====
0016 C =====
0017 C
0018 C TEKTRONIX COMMON
0019 C
0020 COMMON ITEK (45)
0021 C
0022 C LOGICAL UNITS AND COMMON LOCATION
0023 C
0024 COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0025 C
0026 C POINTERS
0027 C
0028 COMMON EXIT ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0029 COMMON IOPTN ,IOVR(7),IPNTR ,ISOC(6),ISUB(8)
0030 COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT ,LUO
0031 COMMON MODE ,NANM ,NCLI ,NGEN ,NGRW
0032 COMMON NOVR ,NSECTS ,NSOC ,NSUB ,NSUR
0033 COMMON NTOP ,NU ,NVEG
0034 C
0035 C GRADING PARAMETERS
0036 C
0037 COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCFA(5)
0038 COMMON GRDVB(5),HWHT(5,10),HWSLI(5,10),NSPF(5),PCEQ19(4)
0039 COMMON PERCNT(5,10),REHCPY(5),REHVOL(5),SLOPE(5,10),WRF
0040 C
0041 C CATEGORY TEXT
0042 C
0043 COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0044 COMMON OVBD(11,13),SRSL(13),SCEC(33,13),SWHY(44,13)
0045 COMMON TPSL(49,13),VGTA(15,13)
0046 C
0047 C EXPECTATION VALUES
0048 C
0049 COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0050 COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0051 COMMON TOPSOI(33,6),VEGETA(10,6)
0052 C
0053 C CATEGORY RESPONSES
0054 C
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0055      COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0056      COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0057      COMMON RTOPSO(9),RVEGET(2)
0058      C
0059      C      FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0060      C
0061      COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHM
0062      COMMON CABS(2),CAC,CACP,CADF,CAIH
0063      COMMON CADS,CAEAF,CAHSAP,CAHSTS,CAIP
0064      COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0065      COMMON CSTRF,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0066      COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0067      C
0068      INTEGER EXIT,CLMA,GDES,GWHY,OVRBD,SBSL
0069      INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0070      INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0071      INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0072      INTEGER VEGETA,ANIMAL
0073      INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0074      INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0075      INTEGER RCLTEC,TTL
0076      C
0077      INTEGER COMMON (1)
0078      EQUIVALENCE (COMMON (1), ITEK (1))
0079      EQUIVALENCE (IARY (1), LUT)
0080      EQUIVALENCE (IARY2 (1), ISTRK)
0081      EQUIVALENCE (IARY2 (2), ISECT)
0082      EQUIVALENCE (IARY2 (3), ICODE)
0083      EQUIVALENCE (IARY2 (4), LEN)
0084      C
0085      LOGICAL LER
0086      C
0087      C      OUTPUT HEADING
0088      WRITE (LUT,1000) (TPSL (1,J), J = 1, 13)
0089      GOTO (10,20,30,40,50,60,70,80,90) LEXIT
0090      C      USER INPUT -> THICKNESS (CATEGORY)
0091      C      (NOT REQUIRED FOR ADM RUN)
0092      10      IF (IARY(2).EQ.3) GOTO 20
0093      WRITE (LUT,1011) (TPSL (2,J), J = 1, 13)
0094      READ (LUT,*) RTOPSO (1)
0095      IF (RTOPSO (1).EQ.0) GOTO 500
0096      IF (RTOPSO (1).GE.1.AND.RTOPSO (1).LE.ITOP(1)) GOTO 15
0097      WRITE (LUT,1015) RTOPSO (1)
0098      GOTO 10
0099      C      USER INPUT -> COST TO REMOVE TOPSOIL
0100      15      WRITE (LUT,1016)
0101      READ (LUT,*) CSTRM
0102      C      USER INPUT -> COST TO RESPREAD TOPSOIL
0103      WRITE (LUT,1017)
0104      READ (LUT,*) CSTRF
0105      C      USER INPUT -> ACTUAL THICKNESS OF TOPSOIL
0106      WRITE (LUT,1018)
0107      READ (LUT,*) THKTS
0108      C      USER INPUT -> PERCENT ORGANIC MATTER
0109      20      WRITE (LUT,1020) ((TPSL (I,J), J=1,13), I = 7,8)
0110      READ (LUT,*) RTOPSO (2)

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0111         IF (RTOPSD (2).EQ.0) GOTO 500
0112         IF (RTOPSD (2).GE.1.AND.RTOPSD (2).LE.ITOP (2)) GOTO 30
0113         WRITE (LUT,1015) RTOPSD (2)
0114         GOTO 20
0115 C         USER INPUT -> TEXTURE
0116 30 WRITE (LUT,1010) (TPSL (12,J), J = 1,13)
0117     READ (LUT,*) RTOPSD (3)
0118         IF (RTOPSD (3).EQ.0) GOTO 500
0119         IF (RTOPSD (3).GE.1.AND.RTOPSD (3).LE.ITOP (3)) GOTO 40
0120         WRITE (LUT,1015) RTOPSD (3)
0121         GOTO 30
0122 C         USER INPUT -> STRUCTURE
0123 40 WRITE (LUT,1020) ((TPSL (I,J), J = 1,13), I = 19,20)
0124     READ (LUT,*) RTOPSD (4)
0125         IF (RTOPSD (4).EQ.0) GOTO 500
0126         IF (RTOPSD (4).GE.1.AND.RTOPSD (4).LE.ITOP (4)) GOTO 50
0127         WRITE (LUT,1015) RTOPSD (4)
0128         GOTO 40
0129 C         USER INPUT -> BULK DENSITY
0130 50 WRITE (LUT,1020) ((TPSL (I,J), J = 1,13), I = 24,25)
0131     READ (LUT,*) RTOPSD (5)
0132         IF (RTOPSD (5).EQ.0) GOTO 500
0133         IF (RTOPSD (5).GE.1.AND.RTOPSD (5).LE.ITOP (5)) GOTO 60
0134         WRITE (LUT,1015) RTOPSD (5)
0135         GOTO 50
0136 C         USER INPUT -> SALINITY
0137 60 WRITE (LUT,1010) (TPSL (28,J), J=1,13)
0138     READ (LUT,*) RTOPSD (6)
0139         IF (RTOPSD (6).EQ.0) GOTO 500
0140         IF (RTOPSD (6).GE.1.AND.RTOPSD (6).LE.ITOP (6)) GOTO 70
0141         WRITE (LUT,1015) RTOPSD (6)
0142         GOTO 60
0143 C         USER INPUT -> SODIUM ADSORPTION RATIO
0144 70 WRITE (LUT,1020) ((TPSL (I,J), J = 1,13), I = 34,35)
0145     READ (LUT,*) RTOPSD (7)
0146         IF (RTOPSD (7).EQ.0) GOTO 500
0147         IF (RTOPSD (7).GE.1.AND.RTOPSD (7).LE.ITOP (7)) GOTO 80
0148         WRITE (LUT,1015) RTOPSD (7)
0149         GOTO 70
0150 C         USER INPUT -> AVAILABLE NITROGEN
0151 80 WRITE (LUT,1020) ((TPSL (I,J), J = 1,13), I = 40,41)
0152     READ (LUT,*) RTOPSD (8)
0153         IF (RTOPSD (8).EQ.0) GOTO 500
0154         IF (RTOPSD (8).GE.1.AND.RTOPSD (8).LE.ITOP (8)) GOTO 90
0155         WRITE (LUT,1015) RTOPSD (8)
0156         GOTO 80
0157 C         USER INPUT -> AVAILABLE PHOSPHORUS
0158 90 WRITE (LUT,1020) ((TPSL (I,J), J = 1,13), I = 45,46)
0159     READ (LUT,*) RTOPSD (9)
0160         IF (RTOPSD (9).EQ.0) GOTO 500
0161         IF (RTOPSD (9).GE.1.AND.RTOPSD (9).LE.ITOP (9)) RETURN
0162         WRITE (LUT,1015) RTOPSD (9)
0163         GOTO 90
0164 C         USER WANTS OUT -> SET EXIT TO ZERO AND RETURN
0165 500 EXIT = 0
0166     RETURN

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0167 C          FORMAT STATEMENTS
0168 1000 FORMAT (/5X,13A2)
0169 C
0170 1010 FORMAT (/5X,13A2" -> _")
0171 C
0172 1011 FORMAT (/5X,13A2" (CATEGORY) -> _")
0173 C
0174 1015 FORMAT (A2" ?? -> RE-INPUT.")
0175 C
0176 1016 FORMAT (/5X"COST TO REMOVE TOPSOIL -> _")
0177 C
0178 1017 FORMAT (/5X"COST TO RESPREAD TOPSOIL -> _")
0179 C
0180 1018 FORMAT (/5X"ACTUAL THICKNESS OF TOPSOIL -> _")
0181 C
0182 1020 FORMAT (/5X,13A2/5X,13A2" -> _")
0183 C
0184 C
0185      END
0186 END$

```



&CAT4 T=00004 IS ON CR00015 USING 00027 BLKS R=0000

```
0001 FTN4
0002 SUBROUTINE CAT4
0003 C ABBREVIATED DISPLAY--CATEGORY 4 / SUBSOIL
0004 C
0005 C LEVEL 2
0006 C
0007 C CAT4 IS ACCESSED BY EIAD TO SCHEDULE INPUTS TO THE CATEGORY
0008 C RESPONSES IN CATEGORY IV - SUBSOIL, USING ABBREVIATED DISPLAY
0009 C
0010 C THE CALLING SEQUENCE IS : CALL CAT4
0011 C
0012 C THIS ROUTINE WAS WRITTEN BY EASTMAN AND MODIFIED BY GREEN
0013 C
0014 C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0015 C =====
0016 C
0017 C TEKTRONIX COMMON
0018 C
0019 C COMMON ITEK (45)
0020 C
0021 C LOGICAL UNITS AND COMMON LOCATION
0022 C
0023 C COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0024 C
0025 C POINTERS
0026 C
0027 C COMMON EXIT ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0028 C COMMON IOPTN ,IOVR(7),IPNTR ,ISOC(6),ISUB(8)
0029 C COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT ,LUO
0030 C COMMON MODE ,NANM ,NCLI ,NGEN ,NGRW
0031 C COMMON NOVR ,NSECTS ,NSOC ,NSUB ,NSUR
0032 C COMMON NTOF ,NU ,NVEG
0033 C
0034 C GRADING PARAMETERS
0035 C
0036 C COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCPA(5)
0037 C COMMON GROVBS(5),HWHT(5,10),HWSL1(5,10),NSFP(5),PCEQ19(4)
0038 C COMMON PERCNT(5,10),REHCPY(5),REHVOL(5),SLOPE(5,10),WBP
0039 C
0040 C CATEGORY TEXT
0041 C
0042 C COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0043 C COMMON OVRD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0044 C COMMON TPSL(49,13),VGTA(15,13)
0045 C
0046 C EXPECTATION VALUES
0047 C
0048 C COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0049 C COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0050 C COMMON TOPSOI(33,6),VEGETA(10,6)
0051 C
0052 C CATEGORY RESPONSES
0053 C
0054 C COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
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0055      COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0056      COMMON RTOPSO(9),RVEGET(2)
0057      C
0058      C      FEASI,TECON,OFUSE SUBSYSTEM PARAMETERS
0059      C
0060      COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHM
0061      COMMON CABS(2),CAC,CACP,CALF,CADH
0062      COMMON CAIS,CAEAF,CAHSAP,CAHSTS,CAIP
0063      COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0064      COMMON CSTRF,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0065      COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0066      C
0067      INTEGER EXIT,CLMA,GDES,GWHY,OVRBD,SBSL
0068      INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0069      INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0070      INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0071      INTEGER VEGETA,ANIMAL
0072      INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0073      INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0074      INTEGER RCLTEC,TTL
0075      C
0076      INTEGER COMMON (1)
0077      EQUIVALENCE (COMMON (1), ITEK (1))
0078      EQUIVALENCE (IARRY (1), LUT)
0079      EQUIVALENCE (IARY2 (1), ISTRK)
0080      EQUIVALENCE (IARY2 (2), ISECT)
0081      EQUIVALENCE (IARY2 (3), ICODE)
0082      EQUIVALENCE (IARY2 (4), LEN)
0083      C
0084      LOGICAL LER
0085      INTEGER ICHNG (7)
0086      DATA ICHNG /2H B,2H C,2H D,2H E,2H F,2H G,2H H/
0087      C
0088      C      OUTPUT HEADING
0089      WRITE (LUT,1000) (SBSL (J), J = 1, 13)
0090      GOTO (10,20,30,40,50,60,70,80) LEXIT
0091      C      USER INPUT -> THICKNESS
0092      10 WRITE (LUT,1010) (TPSL (2,J), J = 1,13)
0093      READ (LUT,*) RSUBSO (1)
0094      IF (RSUBSO (1).EQ.0) GOTO 500
0095      IF (RSUBSO (1).GE.1.AND.RSUBSO (1).LE.ISUB (1)) GOTO 20
0096      WRITE (LUT,1015) RSUBSO (1)
0097      GOTO 10
0098      C      USER INPUT -> TEXTURE
0099      20 WRITE (LUT,1030) ICHNG (1), (TPSL (12,J), J = 2,13)
0100      READ (LUT,*) RSUBSO (2)
0101      IF (RSUBSO (2).EQ.0) GOTO 500
0102      IF (RSUBSO (2).GE.1.AND.RSUBSO (2).LE.ISUB (2)) GOTO 30
0103      WRITE (LUT,1015) RSUBSO (2)
0104      GOTO 20
0105      C      USER INPUT -> STRUCTURE
0106      30 WRITE (LUT,1040) ICHNG (2), (TPSL (19,J), J = 2, 13)
0107      WRITE (LUT,1010) (TPSL (20,J), J = 1,13)
0108      READ (LUT,*) RSUBSO (3)
0109      IF (RSUBSO (3).EQ.0) GOTO 500
0110      IF (RSUBSO (3).GE.1.AND.RSUBSO (3).LE.ISUB (3)) GOTO 40

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0111      WRITE (LUT,1015) RSUBSO (3)
0112      GOTO 30
0113  C          USER INPUT -> BULK DENSITY
0114      40 WRITE (LUT,1040) ICHNG (3), (TPSL (24,J), J = 2,13)
0115      WRITE (LUT,1010) (TPSL (25,J), J = 1,13)
0116      READ (LUT,*) RSUBSO (4)
0117      IF (RSUBSO (4).EQ.0) GOTO 500
0118      IF (RSUBSO (4).GE.1.AND.RSUBSO (4).LE.ISUB (4)) GOTO 50
0119      WRITE (LUT, 1015) RSUBSO (4)
0120      GOTO 40
0121  C          USER INPUT -> SALINITY
0122      50 WRITE (LUT,1030) ICHNG (4), (TPSL (28,J), J = 2,13)
0123      READ (LUT,*) RSUBSO (5)
0124      IF (RSUBSO (5).EQ.0) GOTO 500
0125      IF (RSUBSO (5).GE.1.AND.RSUBSO (5).LE.ISUB (5)) GOTO 60
0126      WRITE (LUT,1015) RSUBSO (5)
0127      GOTO 50
0128  C          USER INPUT -> SODIUM ADSORPTION RATIO
0129      60 WRITE (LUT,1040) ICHNG (5), (TPSL (34,J) , J = 2,13)
0130      WRITE (LUT,1010) (TPSL (35,J), J = 1,13)
0131      READ (LUT,*) RSUBSO (6)
0132      IF (RSUBSO (6).EQ.0) GOTO 500
0133      IF (RSUBSO (6).GE.1.AND.RSUBSO (6).LE.ISUB (6)) GOTO 70
0134      WRITE (LUT,1015) RSUBSO (6)
0135      GOTO 60
0136  C          USER INPUT -> AVAILABLE NITROGEN
0137      70 WRITE (LUT,1040) ICHNG (6), (TPSL (40,J), J = 2,13)
0138      WRITE (LUT,1010) (TPSL (41,J), J=1,13)
0139      READ (LUT,*) RSUBSO (7)
0140      IF (RSUBSO (7).EQ.0) GOTO 500
0141      IF (RSUBSO (7).GE.1.AND.RSUBSO (7).LE.ISUB (7)) GOTO 80
0142      WRITE (LUT,1015) RSUBSO (7)
0143      GOTO 70
0144  C          USER INPUT -> AVAILABLE PHOSPHORUS
0145      80 WRITE (LUT,1040) ICHNG (7), (TPSL (45,J), J = 2,13)
0146      WRITE (LUT,1010) (TPSL (46,J), J = 1,13)
0147      READ (LUT,*) RSUBSO (8)
0148      IF (RSUBSO (8).EQ.0) GOTO 500
0149      IF (RSUBSO (8).GE.1.AND.RSUBSO (8).LE.ISUB (8)) RETURN
0150      WRITE (LUT,1015) RSUBSO (8)
0151      GOTO 80
0152  C          USER WANTS OUT -> SET EXIT TO ZERO AND RETURN
0153      500 EXIT = 0
0154      RETURN
0155  C          FORMAT STATEMENTS
0156      1000 FORMAT (/5X,13A2)
0157  C
0158      1010 FORMAT ( 5X,13A2" -> _")
0159  C
0160      1015 FORMAT (A2," ?? -> RE-INPUT.")
0161  C
0162      1030 FORMAT (/5X,A2,12A2" -> _")
0163  C
0164      1040 FORMAT (/5X,A2,12A2)
0165  C
0166  C

```



0167            END  
0168    END\$

&CAT5 T=00004 IS ON CR00015 USING 00030 BLKS R=0000

```
0001 FTN4
0002 SUBROUTINE CAT5
0003 C ABBREVIATED DISPLAY--CATEGORY 5 / OVERBURDEN
0004 C
0005 C LEVEL 2
0006 C
0007 C CAT5 IS ACCESSED BY EIAD TO SCHEDULE INPUTS TO THE CATEGORY
0008 C RESPONSES IN CATEGORY V - OVERBURDEN, USING ABBREVIATED DISPLAY
0009 C
0010 C THE CALLING SEQUENCE IS : CALL CAT5
0011 C
0012 C
0013 C THIS ROUTINE WAS WRITTEN BY EASTMAN AND MODIFIED BY GREEN
0014 C
0015 C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0016 C =====
0017 C
0018 C TEKTRONIX COMMON
0019 C
0020 COMMON ITEK (45)
0021 C
0022 C LOGICAL UNITS AND COMMON LOCATION
0023 C
0024 COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0025 C
0026 C POINTERS
0027 C
0028 COMMON EXIT ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0029 COMMON IOPTN ,IOVR(7),IPNTR ,ISOC(6),ISUB(8)
0030 COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT ,LUO
0031 COMMON MODE ,NANM ,NCLI ,NGEN ,NGRW
0032 COMMON NOVR ,NSECTS ,NSOC ,NSUB ,NSUR
0033 COMMON NTOP ,NU ,NVEG
0034 C
0035 C GRADING PARAMETERS
0036 C
0037 COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCPA(5)
0038 COMMON GROVES(5),HWHT(5,10),HWSL1(5,10),NSPP(5),PCEQ19(4)
0039 COMMON PERCNT(5,10),REHCFY(5),REHVOL(5),SLOPE(5,10),WBP
0040 C
0041 C CATEGORY TEXT
0042 C
0043 COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0044 COMMON OVRD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0045 COMMON TPSSL(49,13),VGTA(15,13)
0046 C
0047 C EXPECTATION VALUES
0048 C
0049 COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0050 COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0051 COMMON TOPSOI(33,6),VEGETA(10,6)
0052 C
0053 C CATEGORY RESPONSES
0054 C
```

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0055      COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0056      COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0057      COMMON RTOPSO(9),RVEGET(2)
0058      C
0059      C      FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0060      C
0061      COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHM
0062      COMMON CABS(2),CAC,CACF,CADF,CADH
0063      COMMON CADS,CAEAF,CAHSAF,CAHSTS,CAIF
0064      COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0065      COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0066      COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0067      C
0068      INTEGER EXIT,CLMA,GDES,GWHY,OVRD,SBSL
0069      INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0070      INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0071      INTEGER SOCECN,SUBSOI,SURHYD,TOFSOI
0072      INTEGER VEGETA,ANIMAL
0073      INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0074      INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0075      INTEGER RCLTEC,TTL
0076      C
0077      INTEGER COMMON (1)
0078      EQUIVALENCE (COMMON (1), ITEK (1))
0079      EQUIVALENCE (IARRY (1), LUT)
0080      EQUIVALENCE (IARY2 (1), ISTRK)
0081      EQUIVALENCE (IARY2 (2), ISECT)
0082      EQUIVALENCE (IARY2 (3), ICODE)
0083      EQUIVALENCE (IARY2 (4), LEN)
0084      C
0085      LOGICAL LER
0086      INTEGER ICHNG (5)
0087      C
0088      DATA ICHNG/2H D,2H E,2H F,2H G,2H H/
0089      IF (IPNTR.NE.2)  NU = 1
0090      C
0091      C      OUTPUT HEADING
0092      WRITE (LUT,1000) ((OVRD(I,J) , J = 1,13)
0093      GOTO (5,15,20,30,40,50,60,70) LEXIT
0094      C      USER INPUT -> NUMBER OF ROCKS
0095      5   IF (NU.EQ.0) NU = 1
0096      WRITE (LUT,1041) NU
0097      10  WRITE (LUT,1020) ((OVRD(I,J), J = 1,13), I = 2,3)
0098      READ(LUT,*) ROVRBD(1,NU)
0099      IF (ROVRBD(1,NU).EQ.0) GOTO 500
0100      IF (ROVRBD(1,NU).GE.1.AND.ROVRBD(1,NU).LE.IDVR(1)) GOTO 15
0101      WRITE (LUT,1015) ROVRBD(1,NU)
0102      GOTO 10
0103      C      USER INPUT -> THICKNESS OF UNIT
0104      15  WRITE (LUT,1042)
0105      READ(LUT,*) THICK (NU)
0106      IF (THICK (NU).GE.5.) GOTO 20
0107      WRITE (LUT,1015) THICK (NU)
0108      GOTO 15
0109      C      USER INPUT -> TEXTURE
0110      20  WRITE (LUT,1050) ((OVRD(I,J), J = 1,13), I = 8,10)

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0111      READ(LUT,*) ROVRBD(2,NU)
0112          IF(ROVRBD(2,NU).EQ.0) GOTO 500
0113          IF (ROVRBD(2,NU).GE.1.AND.ROVRBD(2,NU).LE.IOVR(2)) GOTO 30
0114      WRITE (LUT,1015) ROVRBD(2,NU)
0115      GOTO 20
0116  C          USER INPUT -> BULK DENSITY
0117  30 WRITE (LUT,1040) ICHNG (1), (TPSL (24,J), J = 2,13)
0118      WRITE (LUT,1010) (TPSL (20,J), J = 1,13)
0119      READ(LUT,*) ROVRBD(3,NU)
0120          IF (ROVRBD(3,NU).EQ.0) GOTO 500
0121          IF (ROVRBD(3,NU).GE.1.AND.ROVRBD(3,NU).LE.IOVR(3)) GOTO 40
0122      WRITE (LUT,1015) ROVRBD(3,NU)
0123      GOTO 30
0124  C          USER INPUT -> SALINITY
0125  40 WRITE (LUT,1030) ICHNG (2), (TPSL (28,J), J = 2,13)
0126      READ(LUT,*) ROVRBD(4,NU)
0127          IF (ROVRBD(4,NU).EQ.0) GOTO 500
0128          IF (ROVRBD(4,NU).GE.1.AND.ROVRBD(4,NU).LE.IOVR(4)) GOTO 50
0129      WRITE (LUT,1015) ROVRBD(4,NU)
0130      GOTO 40
0131  C          USER INPUT -> SODIUM ADSORPTION RATIO
0132  50 WRITE (LUT,1040) ICHNG (3), (TPSL (34,J), J = 2,13)
0133      WRITE (LUT,1010) (TPSL (35,J), J = 1,13)
0134      READ(LUT,*) ROVRBD(5,NU)
0135          IF (ROVRBD(5,NU).EQ.0) GOTO 500
0136          IF (ROVRBD(5,NU).GE.1.AND.ROVRBD(5,NU).LE.IOVR(5)) GOTO 60
0137      WRITE (LUT,1015) ROVRBD(5,NU)
0138      GOTO 50
0139  C          USER INPUT -> AVAILABLE NITROGEN
0140  60 WRITE (LUT,1040) ICHNG (4), (TPSL (40,J), J = 2,13)
0141      WRITE (LUT,1010) (TPSL (41,J), J = 1,13)
0142      READ(LUT,*) ROVRBD(6,NU)
0143          IF (ROVRBD(6,NU).EQ.0) GOTO 500
0144          IF (ROVRBD(6,NU).GE.1.AND.ROVRBD(6,NU).LE.IOVR(6)) GOTO 70
0145      WRITE (LUT,1015) ROVRBD(6,NU)
0146      GOTO 60
0147  C          USER INPUT -> AVAILABLE PHOSPHORUS
0148  70 WRITE (LUT,1040) ICHNG (5), (TPSL (45,J), J = 2, 13)
0149      WRITE (LUT,1010) (TPSL (46,J), J = 1,13)
0150      READ(LUT,*) ROVRBD(7,NU)
0151          IF (ROVRBD(7,NU).EQ.0) GOTO 500
0152          IF (ROVRBD(7,NU).GE.1.AND.ROVRBD(7,NU).LE.IOVR(7)) GOTO 100
0153      WRITE (LUT,1015) ROVRBD(7, NU)
0154      GOTO 70
0155  C          USER SELECTION -> ANOTHER UNIT ?
0156  100      IF (NU.EQ.10) RETURN
0157      WRITE (LUT,1051)
0158      READ(LUT,1011) IANS
0159      IF (IANS.NE.2HYES) RETURN
0160      NU = NU + 1
0161      IF (LER) CALL ERASE
0162      IF (LER) CALL HOME
0163      GOTO 5
0164  C          USER WANTS OUT -> SET EXIT TO ZERO AND RETURN
0165  500 EXIT = 0
0166      RETURN

```

```

0167 C          FORMAT STATEMENTS
0168 1000 FORMAT (/5X,13A2)
0169 C
0170 1010 FORMAT ( 5X,13A2" -> _")
0171 C
0172 1011 FORMAT (A2)
0173 C
0174 1015 FORMAT (A2" ?? -> RE-INPUT.")
0175 C
0176 1020 FORMAT (/5X,13A2/5X,13A2" -> _")
0177 C
0178 1030 FORMAT (/5X,A2,12A2" -> _")
0179 C
0180 1040 FORMAT (/5X,A2,12A2)
0181 C
0182 1041 FORMAT (/5X"NOW WORKING ON LITHOLOGIC UNIT "I2)
0183 C
0184 1042 FORMAT (/5X" B.) THICKNESS OF THIS UNIT-> _" )
0185 C
0186 C
0187 1050 FORMAT (2 (/5X,13A2 ),/5X,13A2" -> _")
0188 C
0189 1051 FORMAT (/5X"PROCEED TO THE NEXT LITHOLOGIC UNIT ? _")
0190 C
0191      END
0192 END$

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&CAT6 T=00004 IS ON CR00015 USING 00024 BLKS R=0000

```
0001 FTN4
0002          SUBROUTINE CAT6
0003 C      ABBREVIATED DISPLAY--CATEGORY 6 / SURFACE WATER HYDROLOGY
0004 C
0005 C LEVEL 2
0006 C
0007 C CAT6 IS ACCESSED BY EIAD TO SCHEDULE INPUTS TO THE CATEGORY
0008 C RESPONSES IN CATEGORY VI - SURFACE WATER HYDROLOGY, USING
0009 C ABBREVIATED DISPLAY
0010 C
0011 C THE CALLING SEQUENCE IS :      CALL CAT6
0012 C
0013 C
0014 C THIS ROUTINE WAS WRITTEN BY EASTMAN AND MODIFIED BY GREEN
0015 C
0016 C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0017 C =====
0018 C
0019 C      TEKTRONIX COMMON
0020 C
0021 C      COMMON ITEK (45)
0022 C
0023 C      LOGICAL UNITS AND COMMON LOCATION
0024 C
0025 C      COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0026 C
0027 C      POINTERS
0028 C
0029 C      COMMON EXIT      ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0030 C      COMMON IOPTN     ,IOVR(7),IPNTR  ,ISOC(6),ISUB(8)
0031 C      COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT  ,LUO
0032 C      COMMON MODE      ,NANM      ,NCLI      ,NGEN      ,NGRW
0033 C      COMMON NOVR      ,NSECTS    ,NSOC      ,NSUB      ,NSUR
0034 C      COMMON NTOP      ,NU        ,NVEG
0035 C
0036 C      GRADING PARAMETERS
0037 C
0038 C      COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCFA(5)
0039 C      COMMON GROUWS(5),HWHT(5,10),HWSLI(5,10),NSPP(5),PCEQ19(4)
0040 C      COMMON PERCNT(5,10),REHCFY(5),REHVOL(5),SLOPE(5,10),WBF
0041 C
0042 C      CATEGORY TEXT
0043 C
0044 C      COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0045 C      COMMON OVRD(11,13),SRSL(13),SCEC(33,13),SWHY(44,13)
0046 C      COMMON TPSSL(49,13),VGTA(15,13)
0047 C
0048 C      EXPECTATION VALUES
0049 C
0050 C      COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0051 C      COMMON OVRBDN(28,6),SOCECN(29,6),SURSOI(30,6),SURHYD(23,6)
0052 C      COMMON TOPSOI(33,6),VEGETA(10,6)
0053 C
0054 C      CATEGORY RESPONSES
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0055 C
0056 COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0057 COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0058 COMMON RTOPSO(9),RVEGET(2)
0059 C
0060 C FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0061 C
0062 COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHM
0063 COMMON CABS(2),CAC,CACP,CADF,CADH
0064 COMMON CAIS,CAEAF,CAHSAP,CAHSTS,CAIP
0065 COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0066 COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0067 COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0068 C
0069 INTEGER EXIT,CLMA,GDES,GWHY,OVRBD,SBSL
0070 INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0071 INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0072 INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0073 INTEGER VEGETA,ANIMAL
0074 INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0075 INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0076 INTEGER RCLTEC,TTL
0077 C
0078 INTEGER COMMON (1)
0079 EQUIVALENCE (COMMON (1), ITEK (1))
0080 EQUIVALENCE (IARY (1), LUT)
0081 EQUIVALENCE (IARY2 (1), ISTRK)
0082 EQUIVALENCE (IARY2 (2), ISECT)
0083 EQUIVALENCE (IARY2 (3), ICODE)
0084 EQUIVALENCE (IARY2 (4), LEN)
0085 C
0086 LOGICAL LER
0087 C
0088 C OUTPUT HEADING
0089 WRITE (LUT,1005) ((SWHY (I,J), J = 1,13), I = 1,2)
0090 GOTO (10,20,30,40,50,60) LEXIT
0091 C USER INPUT -> TYPE OF SURFACE WATER PRESENT
0092 10 WRITE (LUT,1050) ((SWHY (I,J), J = 1,13), I = 3,5)
0093 READ (LUT,*) RSURHY (1)
0094 IF (RSURHY (1).EQ.0) GOTO 500
0095 IF (RSURHY (1).GE.1.AND.RSURHY (1).LE.ISUR (1)) GOTO 20
0096 WRITE (LUT,1015) RSURHY (1)
0097 GOTO 10
0098 C USER INPUT -> AMOUNT OF WATER PRESNT
0099 20 WRITE (LUT,1060) ((SWHY (I,J), J = 1,13), I = 11,19)
0100 READ (LUT,*) RSURHY (2)
0101 IF (RSURHY (2).EQ.0) GOTO 500
0102 IF (RSURHY (2).GE.1.AND.RSURHY (2).LE.ISUR (2)) GOTO 30
0103 WRITE (LUT,1015) RSURHY (2)
0104 GOTO 20
0105 C USER INPUT -> INDEX OF DISSECTION
0106 30 WRITE (LUT,1010) (SWHY (25,J), J = 1,13)
0107 READ (LUT,*) RSURHY (3)
0108 IF (RSURHY (3).EQ.0) GOTO 500
0109 IF (RSURHY (3).GE.1.AND.RSURHY (3).LE.ISUR (3)) GOTO 40
0110 WRITE (LUT,1015) RSURHY (3)

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0111      GOTO 30
0112 C      USER INPUT -> INDEX OF MEANDER
0113      40 WRITE (LUT,1010) (SWHY (29,J), J = 1, 13)
0114      READ (LUT,*) RSURHY (4)
0115      IF (RSURHY (4).EQ.0) GOTO 500
0116      IF (RSURHY (4).GE.1.AND.RSURHY (4).LE.ISUR (4)) GOTO 50
0117      WRITE (LUT,1015) RSURHY (4)
0118      GOTO 40
0119 C      USER INPUT -> SALINITY
0120      50 WRITE (LUT,1020) ((SWHY (1,J), J = 1,13), I = 33,34)
0121      READ (LUT,*) RSURHY(5)
0122      IF (RSURHY (5).EQ.0) GOTO 500
0123      IF (RSURHY (5).GE.1.AND.RSURHY (5).LE.ISUR (5)) GOTO 60
0124      WRITE (LUT,1015) RSURHY (5)
0125      GOTO 50
0126 C      USER INPUT -> SODIUM ADSORPTION RATIO
0127      60 WRITE (LUT,1020) ((SWHY (I,J), J = 1,13), I = 39,40)
0128      READ (LUT,*) RSURHY (6)
0129      IF (RSURHY (6).EQ.0) GOTO 500
0130      IF (RSURHY (6).GE.1.AND.RSURHY (6).LE.ISUR (6)) RETURN
0131      WRITE (LUT,1015) RSURHY (6)
0132      GOTO 60
0133 C      USER WANTS OUT -> SET EXIT TO ZERO AND RETURN
0134      500 EXIT = 0
0135      RETURN
0136 C      FORMAT STATEMENTS
0137      1005 FORMAT (2(/5X,13A2))
0138 C
0139      1010 FORMAT (/5X,13A2" -> _")
0140 C
0141      1015 FORMAT (A2" ?? -> RE-INPUT.")
0142 C
0143      1020 FORMAT (/5X,13A2  ,/5X,13A2" -> _")
0144 C
0145      1050 FORMAT (2(/5X,13A2)  ,/5X,13A2" -> _")
0146 C
0147      1060 FORMAT (8(/5X,13A2)  ,/5X,13A2" -> _")
0148 C
0149      END
0150      END$

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2CAT7 T=00004 IS ON CR00015 USING 00024 BLKS R=0000

```
0001 FTN4
0002 SUBROUTINE CAT7
0003 C ABBREVIATED DISPLAY--CATEGORY 7 / GROUND WATER HYDROLOGY
0004 C
0005 C LEVEL 2
0006 C
0007 C CAT7 IS ACCESSED BY EIAD TO SCHEDULE INPUTS TO THE CATEGORY
0008 C RESPONSES IN CATEGORY VII - GROUND WATER HYDROLOGY, USING
0009 C ABBREVIATED DISPLAY
0010 C
0011 C THE CALLING SEQUENCE IS : CALL CAT7
0012 C
0013 C
0014 C THIS ROUTINE WAS WRITTEN BY EASTMAN AND MODIFIED BY GREEN
0015 C
0016 C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0017 C =====
0018 C
0019 C TEKTRONIX COMMON
0020 C
0021 C COMMON ITEX (45)
0022 C
0023 C LOGICAL UNITS AND COMMON LOCATION
0024 C
0025 C COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0026 C
0027 C POINTERS
0028 C
0029 C COMMON EXIT ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0030 C COMMON IOPTN ,IOVR(7),IPNTR ,ISOC(6),ISUR(8)
0031 C COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT ,LUO
0032 C COMMON MODE ,NANM ,NCLI ,NGEN ,NGRW
0033 C COMMON NOVR ,NSECTS ,NSOC ,NSUR ,NSUR
0034 C COMMON NTOP ,NU ,NVEG
0035 C
0036 C GRADING PARAMETERS
0037 C
0038 C COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCFA(5)
0039 C COMMON GROVBS(5),HWHT(5,10),HWSLI(5,10),NSPF(5),PCEQ19(4)
0040 C COMMON PERCNT(5,10),REHCFY(5),REHVOL(5),SLOPE(5,10),WBP
0041 C
0042 C CATEGORY TEXT
0043 C
0044 C COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0045 C COMMON OVRD(11,13),SRSL(13), SCEC(33,13),SWHY(44,13)
0046 C COMMON TPST(49,13),VGTA(15,13)
0047 C
0048 C EXPECTATION VALUES
0049 C
0050 C COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0051 C COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0052 C COMMON TOPSOI(33,6),VEGETA(10,6)
0053 C
0054 C CATEGORY RESPONSES
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0055 C
0056 COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0057 COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0058 COMMON RTOPSO(9),RVEGET(2)
0059 C
0060 C FEASI,TECON,DPUSE SUBSYSTEM PARAMETERS
0061 C
0062 COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHM
0063 COMMON CABS(2),CAC,CACF,CAIF,CAIH
0064 COMMON CAIS,CAEAF,CAHSAF,CAHSTS,CAIP
0065 COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0066 COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0067 COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0068 C
0069 INTEGER EXIT,CLMA,GDES,GWHY,OVRBD,SBSL
0070 INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0071 INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0072 INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0073 INTEGER VEGETA,ANIMAL
0074 INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0075 INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0076 INTEGER RCLTEC,TTL
0077 C
0078 INTEGER COMMON (1)
0079 EQUIVALENCE (COMMON (1), ITEX (1))
0080 EQUIVALENCE (IARRY (1), LUT)
0081 EQUIVALENCE (IARY2 (1), ISTRK)
0082 EQUIVALENCE (IARY2 (2), ISECT)
0083 EQUIVALENCE (IARY2 (3), ICODE)
0084 EQUIVALENCE (IARY2 (4), LEN)
0085 C
0086 LOGICAL LER
0087 INTEGER ICHNG (2)
0088 C
0089 DATA ICHNG /2H C,2H D/
0090 C
0091 C OUTPUT HEADING
0092 WRITE (LUT,1050) ((GWHY (I,J), J = 1,13), I = 1,2)
0093 GOTO (10,20,30,40,50) LEXIT
0094 C USER INPUT -> DEPTH TO WATER TABLE
0095 10 WRITE (LUT,1060) ((GWHY (I,J), J = 1,13), I = 3,5)
0096 READ (LUT,*) RGRWHY (1)
0097 IF (RGRWHY (1).EQ.0) GOTO 500
0098 IF (RGRWHY (1).GE.1.AND.RGRWHY (1).LE.IGRW (1)) GOTO 20
0099 WRITE (LUT,1015) RGRWHY (1)
0100 GOTO 10
0101 C USER INPUT -> AMOUNT OF GROUNDWATER
0102 20 WRITE (LUT,1070) ((GWHY (I,J), J = 1,13), I = 10,18)
0103 READ (LUT,*) RGRWHY (2)
0104 IF (RGRWHY (2).EQ.0) GOTO 500
0105 IF (RGRWHY (2).GE.1.AND.RGRWHY (2).LE.IGRW (2)) GOTO 30
0106 WRITE (LUT,1015) RGRWHY (2)
0107 GOTO 20
0108 C USER INPUT -> SALINITY
0109 30 WRITE (LUT,1040) ICHNG (1), (SWHY (33,J), J = 3,13)
0110 WRITE (LUT,1011) (SWHY (34,J), J = 1,13)

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```

0111      READ (LUT,*) RGRWHY (3)
0112          IF (RGRWHY (3).EQ.0) GOTO 500
0113          IF (RGRWHY (3).GE.1.AND.RGRWHY (3).LE.IGRW (3)) GOTO 40
0114      WRITE (LUT,1015) RGRWHY (3)
0115      GOTO 30
0116  C          USER INPUT -> SODIUM ADSORPTION RATIO
0117      40 WRITE (LUT,1040) ICHNG (2), (SWHY (39,J),J = 3,13)
0118      WRITE (LUT,1011) (SWHY (40,J), J = 1,13)
0119      READ (LUT,*) RGRWHY (4)
0120          IF (RGRWHY (4).EQ.0) GOTO 500
0121          IF (RGRWHY (4).GE.1.AND.RGRWHY (4).LE.IGRW (4)) GOTO 50
0122      WRITE (LUT,1015) RGRWHY (4)
0123      GOTO 40
0124  C          USER INPUT -> ALLUVIAL VALLEY FLOOR
0125      50 WRITE (LUT,1020) (( GWHY (I,J), J = 1,13), I = 19,20)
0126      READ (LUT,*) RGRWHY (5)
0127          IF (RGRWHY (5).EQ.0) GOTO 500
0128          IF (RGRWHY (5).GE.1.AND.RGRWHY (5).LE.IGRW (5)) RETURN
0129      WRITE (LUT,1015) RGRWHY (5)
0130      GOTO 50
0131  C          USER WANTS OUT -> SET EXIT TO ZERO AND RETURN
0132      500 EXIT = 0
0133      RETURN
0134  C          FORMAT STATEMENTS
0135      1010 FORMAT ( 5X,13A2" -> _")
0136  C
0137      1011 FORMAT ( 5X,13A2" -> _")
0138  C
0139      1015 FORMAT (A2" ?? -> RE-INPUT.")
0140  C
0141      1020 FORMAT (/5X,13A2  ,/5X,13A2" -> _")
0142  C
0143      1040 FORMAT (/5X,A2,11A2)
0144  C
0145      1070 FORMAT (8(/5X,13A2)  ,/5X,13A2" -> _")
0146  C
0147      1060 FORMAT (2(/5X,13A2)  ,/5X,13A2" -> _")
0148  C
0149      1050 FORMAT (2(/5X,13A2 ))
0150  C
0151      END
0152  END$

```



&CAT8 T=00004 IS ON CR00015 USING 00019 BLKS R=0000

```
0001 FTN4
0002 SUBROUTINE CAT8
0003 C ABBREVIATED DISPLAY--CATEGORY 9 / VEGETATION
0004 C
0005 C LEVEL 2
0006 C
0007 C CAT8 IS ACCESSED BY EIAD TO SCHEDULE INPUTS TO THE CATEGORY
0008 C RESPONSES IN CATEGORY VIII - VEGETATION, USING ABBREVIATED DISPLAY
0009 C
0010 C THE CALLING SEQUENCE IS : CALL CAT8
0011 C
0012 C
0013 C THIS ROUTINE WAS WRITTEN BY EASTMAN AND MODIFIED BY GREEN
0014 C
0015 C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0016 C =====
0017 C
0018 C TEKTRONIX COMMON
0019 C
0020 COMMON ITEK (45)
0021 C
0022 C LOGICAL UNITS AND COMMON LOCATION
0023 C
0024 COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0025 C
0026 C POINTERS
0027 C
0028 COMMON EXIT ,IANM(3),ICL1(2),IGEN(3),IGRW(5)
0029 COMMON IOPTN ,IOVR(7),IPNTR ,ISOC(6),ISUB(8)
0030 COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT ,LUO
0031 COMMON MODE ,NANM ,NCL1 ,NGEN ,NGRW
0032 COMMON NOVR ,NSECTS ,NSOC ,NSUB ,NSUR
0033 COMMON NTOP ,NU ,NVEG
0034 C
0035 C GRADING PARAMETERS
0036 C
0037 COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCPA(5)
0038 COMMON GROVES(5),HWHT(5,10),HWSL1(5,10),NSFP(5),PCEQ19(4)
0039 COMMON PERCNT(5,10),REHCPY(5),REHVOL(5),SLOPE(5,10),WBP
0040 C
0041 C CATEGORY TEXT
0042 C
0043 COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0044 COMMON OVRD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0045 COMMON TPSL(49,13),VGTA(15,13)
0046 C
0047 C EXPECTATION VALUES
0048 C
0049 COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0050 COMMON OVRDND(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0051 COMMON TOPSOI(33,6),VEGETA(10,6)
0052 C
0053 C CATEGORY RESPONSES
0054 C
```



```

0055      COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0056      COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0057      COMMON RTOPSO(9),RVEGET(2)
0058      C
0059      C      FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0060      C
0061      COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHM
0062      COMMON CABS(2),CAC,CACP,CADF,CADH
0063      COMMON CAIS,CAEAF,CAHSAP,CAHSTS,CAIP
0064      COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0065      COMMON CSTRF,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0066      COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0067      C
0068      INTEGER EXIT,CLMA,GDES,GWHY,OVRBD,SBSL
0069      INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0070      INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0071      INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0072      INTEGER VEGETA,ANIMAL
0073      INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0074      INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0075      INTEGER RCLTEC,TTL
0076      C
0077      INTEGER COMMON (1)
0078      EQUIVALENCE (COMMON (1), ITEK (1))
0079      EQUIVALENCE (IARY (1), LUT)
0080      EQUIVALENCE (IARY2 (1), ISTRK)
0081      EQUIVALENCE (IARY2 (2), ISECT)
0082      EQUIVALENCE (IARY2 (3), ICODE)
0083      EQUIVALENCE (IARY2 (4), LEN)
0084      C
0085      LOGICAL LER
0086      C
0087      C      OUTPUT HEADING
0088      WRITE (LUT,1000) (VGTA (1,J), J = 1,13)
0089      GOTO (10,20) LEXIT
0090      C      USER INPUT -> MOST IMPORTANT COMMUNITY TYPE
0091      10 WRITE (LUT,1020) ((VGTA (I,J), J = 1,13), I = 2,3)
0092      READ (LUT,*) RVEGET (1)
0093      IF (RVEGET (1).EQ.0) GOTO 500
0094      IF (RVEGET (1).GE.1.AND.RVEGET (1).LE.IVEG (1)) GOTO 20
0095      WRITE (LUT,1015) RVEGET (1)
0096      GOTO 10
0097      C      USER INPUT -> SECONDARY IMPORTANT TYPES
0098      20 WRITE (LUT,1010) (VGTA (14,J), J = 1,13)
0099      READ (LUT,*) RVEGET (2)
0100      IF (RVEGET (2).EQ.0) GOTO 500
0101      IF (RVEGET (2).GE.1.AND.RVEGET (2).LE.IVEG (2)) RETURN
0102      WRITE (LUT,1015) RVEGET (2)
0103      GOTO 20
0104      C      USER WANTS OUT -> SET EXIT TO ZERO AND RETURN
0105      500 EXIT = 0
0106      RETURN
0107      C      FORMAT STATEMENTS
0108      1000 FORMAT (/5X,13A2)
0109      C
0110      1010 FORMAT (/5X,13A2" -> _")

```

```
0111 C
0112 1015 FORMAT (A2" ?? -> RE-INPUT.")
0113 C
0114 1020 FORMAT (/5X,13A2, /5X,13A2" -> _")
0115 C
0116 END
0117 END$
```

&CAT9 T=00004 IS ON CR00015 USING 00020 BLKS R=0000

```
0001 FTN4
0002 SUBROUTINE CAT9
0003 C ABBREVIATED DISPLAY--CATEGORY 9 / ANIMALS
0004 C
0005 C LEVEL 2
0006 C
0007 C CAT9 IS ACCESSED BY EIAD TO SCHEDULE INPUTS TO THE CATEGORY
0008 C RESPONSES IN CATEGORY IX - ANIMALS, USING ABBREVIATED DISPLAY
0009 C
0010 C THE CALLING SEQUENCE IS : CALL CAT9
0011 C
0012 C
0013 C THIS ROUTINE WAS WRITTEN BY EASTMAN AND MODIFIED BY GREEN
0014 C
0015 C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0016 C =====
0017 C
0018 C TEKTRONIX COMMON
0019 C
0020 C COMMON ITEK (45)
0021 C
0022 C LOGICAL UNITS AND COMMON LOCATION
0023 C
0024 C COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0025 C
0026 C POINTERS
0027 C
0028 C COMMON EXIT ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0029 C COMMON IOPTN ,IOVR(7),IPNTR ,ISOC(6),ISUB(8)
0030 C COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT ,LUO
0031 C COMMON MODE ,NANM ,NCLI ,NGEN ,NGRW
0032 C COMMON NOVR ,NSECTS ,NSOC ,NSUB ,NSUR
0033 C COMMON NTOP ,NU ,NVEG
0034 C
0035 C GRADING PARAMETERS
0036 C
0037 C COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCPA(5)
0038 C COMMON GRDUBS(5),HWHT(5,10),HWSLI(5,10),NSPP(5),PCEQ19(4)
0039 C COMMON PERCNT(5,10),REHCPY(5),REHVOL(5),SLOPE(5,10),WBP
0040 C
0041 C CATEGORY TEXT
0042 C
0043 C COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0044 C COMMON OVRD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0045 C COMMON TPSL(49,13),VGTA(15,13)
0046 C
0047 C EXPECTATION VALUES
0048 C
0049 C COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0050 C COMMON OVRBDN(28,6),SOCECN(29,6),SUBSO1(30,6),SURHYD(23,6)
0051 C COMMON TOPSOI(33,6),VEGETA(10,6)
0052 C
0053 C CATEGORY RESPONSES
0054 C
```



```

0055      COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0056      COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0057      COMMON RTOPSO(9),RVEGET(2)
0058      C
0059      C      FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0060      C
0061      COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHM
0062      COMMON CABS(2),CAC,CACF,CADF,CADH
0063      COMMON CADS,CAEAF,CAHSAF,CAHSTS,CAIF
0064      COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0065      COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0066      COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0067      C
0068      INTEGER EXIT,CLMA,GDES,GWHY,OVRBD,SBSL
0069      INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0070      INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0071      INTEGER SOCECN,SUBSO1,SURHYD,TOPSOI
0072      INTEGER VEGETA,ANIMAL
0073      INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0074      INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0075      INTEGER RCLTEC,TTL
0076      C
0077      INTEGER COMMON (1)
0078      EQUIVALENCE (COMMON (1), ITEK (1))
0079      EQUIVALENCE (IARY (1), LUT)
0080      EQUIVALENCE (IARY2 (1), ISTRK)
0081      EQUIVALENCE (IARY2 (2), ISECT)
0082      EQUIVALENCE (IARY2 (3), ICODE)
0083      EQUIVALENCE (IARY2 (4), LEN)
0084      C
0085      LOGICAL LER
0086      C
0087      C      OUTPUT HEADING
0088      WRITE (LUT,1000) ((ANIM (I,J), J = 1,13), I = 1,3)
0089      GOTO (10,20,30) LEXIT
0090      C      USER INPUT -> IMPORTANT TYPES PRESENT
0091      10 WRITE (LUT,1020) ((ANIM (I,J), J = 1,13), I = 2,3)
0092      READ (LUT,*) RANIMA (1)
0093      IF (RANIMA (1).EQ.0) GOTO 500
0094      IF (RANIMA (1).GE.1.AND.RANIMA (1).LE.IANM (1)) GOTO 20
0095      WRITE (LUT,1015) RANIMA (1)
0096      GOTO 10
0097      C      USER INPUT -> SECONDARY TYPES PRESENT
0098      20 WRITE (LUT,1020) ((ANIM (I,J), J = 1,13), I = 20,21)
0099      READ (LUT,*) RANIMA (2)
0100      IF (RANIMA (2).EQ.0) GOTO 500
0101      IF (RANIMA (2).GE.1.AND.RANIMA (2).LE.IANM (2)) GOTO 30
0102      WRITE (LUT,1015) RANIMA (2)
0103      GOTO 20
0104      C      USER INPUT -> LIVESTOCK GRAZING
0105      30 WRITE (LUT,1020) ((ANIM (I,J), J = 1,13), I = 16,17)
0106      READ (LUT,*) RANIMA (3)
0107      IF (RANIMA (3).EQ.0) GOTO 500
0108      IF (RANIMA (3).GE.1.AND.RANIMA (3).LE.IANM (3)) RETURN
0109      WRITE (LUT, 1015) RANIMA (3)
0110      GOTO 30

```

```
0111 C          USER WANTS OUT -> SET EXIT TO ZERO AND RETURN
0112     500 EXIT = 0
0113     RETURN
0114 C          FORMAT STATEMENTS
0115     1000 FORMAT (/5X,13A2)
0116 C
0117     1015 FORMAT (A2" ?? -> RE-INPUT.")
0118 C
0119     1020 FORMAT (/5X,13A2,/5X,13A2" -> _")
0120 C
0121     END
0122 END$
```

&CLIMA T=00004 IS ON CR00015 USING 00037 BLKS R=0000

```
0001  FTN4
0002                      SUBROUTINE CLIMA
0003  C      FULL DISPLAY--CATEGORY 2 / CLIMATOLOGY
0004  C
0005  C LEVEL 2
0006  C
0007  C CLIMA IS ACCESSED BY EIFD TO SCHEDULE INPUTS/EDITS TO
0008  C CATEGORY RESPONSES, AND EDITS TO EXPECTATION OF SUCCESS
0009  C VALUES TO CATEGORY 2 - CLIMATOLOGY, USING FULL DISPLAY
0010  C
0011  C THE CALLING SEQUENCE IS :          CALL CLIMA
0012  C
0013  C CLIMA USES THE TCS ROUTINES : ERASE AND HOME
0014  C
0015  C THE LOCAL VARIABLES ARE :
0016  C
0017  C      IANS      -> ANSWER CELL
0018  C      II        -> 'I' INDEX [ (I,J) ] TO CLIMAT ARRAY
0019  C      IOLD       -> PRE-EDIT CATEGORY RESPONSE VALUE
0020  C      LUORN      -> LAND USE OPTION REFERENCE NUMBER :
0021  C                  1 -> CROPLAND
0022  C                  2 -> NATIVE VEGETATION
0023  C                  3 -> WILDLIFE
0024  C                  4 -> WATER RECREATION
0025  C                  5 -> HIGH USE
0026  C                  6 -> OTHER
0027  C      NN        -> HEADING NUMBER
0028  C
0029  C CLIMA IS SWAPPED IN BY PROGRAM CLIMX
0030  C
0031  C THIS ROUTINE WAS WRITTEN BY GREEN
0032  C
0033  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0034  C =====
0035  C
0036  C      TEKTRONIX COMMON
0037  C
0038  C      COMMON ITEK (45)
0039  C
0040  C      LOGICAL UNITS AND COMMON LOCATION
0041  C
0042  C      COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0043  C
0044  C      POINTERS
0045  C
0046  C      COMMON EXIT      ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0047  C      COMMON IOPTN     ,IOVR(7),IPNTR ,ISOC(6),ISUB(8)
0048  C      COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT ,LUD
0049  C      COMMON MODE      ,NANM ,NCLI ,NGEN ,NGRW
0050  C      COMMON NOVR      ,NSECTS ,NSOC ,NSUB ,NSUR
0051  C      COMMON NTOP      ,NU ,NVEG
0052  C
0053  C      GRADING PARAMETERS
0054  C
```



```

0055      COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCFA(5)
0056      COMMON GRDVBS(5),HWHT(5,10),HWSL1(5,10),NSPF(5),PCEQ19(4)
0057      COMMON PERCNT(5,10),REHCPY(5),REHVOL(5),SLOPE(5,10),WBP
0058      C
0059      C      CATEGORY TEXT
0060      C
0061      COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0062      COMMON OVRD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0063      COMMON TPSL(49,13),VGTA(15,13)
0064      C
0065      C      EXPECTATION VALUES
0066      C
0067      COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0068      COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0069      COMMON TOPSOI(33,6),VEGETA(10,6)
0070      C
0071      C      CATEGORY RESPONSES
0072      C
0073      COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0074      COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0075      COMMON RTPSO(9),RVEGET(2)
0076      C
0077      C      FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0078      C
0079      COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CAHBM
0080      COMMON CABS(2),CAC,CACP,CAUF,CAIH
0081      COMMON CADS,CAEAF,CAHSAF,CAHSTS,CAIF
0082      COMMON CAK3FC,CASF,CASNC,CSTES,CSTRM
0083      COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0084      COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0085      C
0086      INTEGER EXIT,CLMA,GDES,GWHY,OVRD,SBSL
0087      INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0088      INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0089      INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0090      INTEGER VEGETA,ANIMAL
0091      INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0092      INTEGER RSUBSO,RSURHY,RTPSO,RVEGET,RANIMA
0093      INTEGER RCLTEC,TTL
0094      C
0095      INTEGER COMMON (1)
0096      EQUIVALENCE (COMMON (1), ITEK (1))
0097      EQUIVALENCE (IARRY (1), LUT)
0098      EQUIVALENCE (IARY2 (1), ISTRK)
0099      EQUIVALENCE (IARY2 (2), ISECT)
0100      EQUIVALENCE (IARY2 (3), ICODE)
0101      EQUIVALENCE (IARY2 (4), LEN)
0102      C
0103      C      LOGICAL LER
0104      C
0105      C      DISPLAY MODE
0106      1      IF (.NOT.LER) GOTO 5
0107      CALL ERASE
0108      CALL HOME
0109      5      GOTO(10,20,30) MODE
0110      10      WRITE(LUT,1010)

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0111      GOTO 40
0112      20 WRITE(LUT,2010)
0113      GOTO 40
0114      30 WRITE(LUT,3010)
0115      40 IF ( MODE .GT. 1 ) GOTO 50
0116      GOTO (100 ,200) LEXIT
0117 C      USER INPUT -> EDIT HEADING
0118      50 WRITE (LUT, 2020)
0119      51 READ (LUT, 2030) IANS
0120      IF (IANS.EQ.2HA ) GOTO 100
0121      IF (IANS.EQ.2HB ) GOTO 200
0122      IF (IANS.EQ.2HNO) RETURN
0123      WRITE (LUT, 1200)
0124      GOTO 51
0125      100 NN = 1
0126      IF(MODE.EQ.1) GOTO 101
0127      IF(LER) CALL ERASE
0128      IF(LER) CALL HOME
0129      101 WRITE (LUT, 1000) (CLMA (1, 1), I=1, 13)
0130 C      DISPLAY HEADING A -> PRECIPITATION
0131      J=1
0132      WRITE (LUT, 1020)
0133      WRITE (LUT, 1050) ( (CLMA (K, I), I=1, 13), K=2, 3)
0134      DO 105 K=4, 7
0135      WRITE (LUT,1100) (CLMA (K,1),I=1,13),(CLIMAT (J,I),I=1,6)
0136      105 J = J + 1
0137      GOTO (140, 130, 110) MODE
0138 C      EDIT EXPECTATIONS
0139 C      USER INPUT -> SUBHEADING NUMBER
0140      110 WRITE (LUT, 3020)
0141      111 READ (LUT, *) II
0142      GOTO 145
0143 C      USER INPUT -> LAND USE OPTION REFERENCE NUMBER
0144      115 WRITE (LUT, 3030)
0145      116 READ (LUT, *) LUORN
0146      IF (LUORN.GE.1.AND.LUORN.LE.6) GOTO 120
0147      WRITE (LUT, 1200)
0148      GOTO 116
0149      120 GOTO (125, 122) NN
0150      122 II=II+ICLI (1)
0151 C      USER INPUT -> EXPECTATION VALUE
0152      125 WRITE (LUT, 3040)
0153      126 READ (LUT, *) CLIMAT (II, LUORN)
0154      IF(CLIMAT(II,LUORN).GE.0.AND.CLIMAT(II,LUORN).LE.4) GOTO 500
0155      WRITE (LUT, 3050)
0156      GOTO 126
0157 C      EDIT CATEGORY RESPONSES
0158      130 IOLD = RCLIMA (NN)
0159      131 WRITE (LUT, 2040) IOLD
0160      GOTO 144
0161 C      INPUT CATEGORY RESPONSES
0162      140 WRITE (LUT, 2000)
0163      144 READ (LUT, *) RCLIMA (NN)
0164      IF (RCLIMA (NN).EQ.0) GOTO (900, 146) MODE
0165      II=RCLIMA (NN)
0166      145 IF (II.GE.1.AND.II.LE.ICLI (NN)) GOTO (600, 500, 115) MODE

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0167      146 WRITE (LUT, 1200)
0168      GOTO (144, 144, 111) MODE
0169 C      DISPLAY HEADING B -> WIND VELOCITY
0170      200 NN=2
0171      IF (.NOT.LER) GOTO 205
0172      CALL ERASE
0173      CALL HOME
0174      WRITE (LUT, 1000) (CLMA (1, 1), I = 1, 13)
0175      205 WRITE (LUT, 1020)
0176      WRITE (LUT, 1050) ( (CLMA (K, 1), I=1, 13), K=8, 9)
0177      J=ICLI (1)+1
0178      DO 210 K=10, 13
0179      WRITE (LUT, 1100) (CLMA (K, I), I=1, 13), (CLIMAT (J, I), I=1,
0180      210 J=J+1
0181      GOTO (140, 130, 110) MODE
0182 C      USER INPUT -> MORE EDITS ?
0183      500 WRITE (LUT, 3060)
0184      READ (LUT, 2030) IANS
0185      IF (IANS.NE.2HYES) RETURN
0186      GOTO 1
0187 C      INPUT MODE -> DIRECT TO INDICATED HEADING
0188      600 IF (NN.EQ.NCLI) RETURN
0189      GOTO 200
0190 C      USER WANTS OUT -> SET EXIT TO ZERO AND QUIT
0191      900 EXIT=0
0192      RETURN
0193 C      FORMAT STATEMENTS
0194      1000 FORMAT ( 13A2, 44 ('*'), /, 26X, '*',
0195      &10X, 'STANDARD EXPECTATIONS', 11X, '*', /,
0196      &26X, 44 ('*'), /, 26X, '*CROP*', 2X,
0197      '$NATIVE', 2X, '*WILD*', 2X, 'WATER', 3X,
0198      &'*HIGH*OTHER*', /, 26X,
0199      &'*LAND*VEGETATION*LIFE*RECREATION*USE *', 5X, '*')
0200 C
0201      1020 FORMAT (70 ('*'), /, 26X, '*4X*10X*4X*10X*4X*5X*')
0202 C
0203      1050 FORMAT (13A2, '*', 4X, '*', 10X, '*', 4X, '*',
0204      &10X, '*', 4X, '*', 5X, '*')
0205 C
0206      1100 FORMAT (13A2,
0207      &'* 'I1' * '11' * 'I1' * 'I1' * '11' * '11' *
0208 C
0209      1200 FORMAT (/ 'YOU HAVE TYPED IN AN ILLEGAL ANSWER.',
0210      &/, 'GIVE HER ANOTHER SHOT -> _')
0211 C
0212      2000 FORMAT ('ENTER THE APPROPRIATE ', 4X,
0213      &44 ('*'), /, 'NUMBER, OR ZERO TO QUIT -> _')
0214 C
0215      1010 FORMAT ( 17X'INPUT RESPONSES/CLIMATOLOGY'//)
0216 C
0217      2010 FORMAT ( 17X'EDIT RESPONSES/CLIMATOLOGY'//)
0218 C
0219      3010 FORMAT ( 17X'EDIT EXPECTATIONS/CLIMATOLOGY'//)
0220 C
0221      2020 FORMAT (/, 5X'IN WHICH HEADING IS YOUR DESIRED EDIT?'/,
0222      &5X' (ENTER A, B, OR NONE) -> _')

```



```

0223 C
0224 2030 FORMAT (A2)
0225 C
0226 2040 FORMAT (/ , 5X"YOUR CURRENT RESPONSE IS ->"I1, //,
0227      &5X"ENTER YOUR NEW RESPONSE HERE -> _")
0228 C
0229 3020 FORMAT (/ , 5X"IN WHICH SUB-HEADING IS THE EXPECTATION VALUE"/ ,
0230      &5X"YOU WISH TO CHANGE ? (ENTER THE APPROPRIATE NUMBER) -> _")
0231 C
0232 3030 FORMAT(/5X"SELECT THE LAND USE OPTION YOU WISH TO CHANGE"/
0233      > 1X" -1- / -2- / -3- / -4- / -5- / -6- /"/
0234      > 1X"CROPLAND/NAT.VEG./WILDLIFE/WAT.REC./HIGH USE/ OTHER/"
0235      >/5X"ENTER YOUR SELECTION HERE -> _")
0236 C
0237 3040 FORMAT (/ , 5X"ENTER YOUR NEW EXPECTATION VALUE HERE -> _")
0238 C
0239 3050 FORMAT (/ , 5X"ERROR--> YOUR EXPECTATION VALUE MUST BE"/ ,
0240      .....&5X"0,1,2,3, OR 4 TO AVOID INTRODUCING A BIAS -> _")
0241 C
0242 3060 FORMAT (/ , 5X"ANY MORE EDITS TO CLIMATOLOGY ?"/ ,
0243      &5X" (YES OR NO) -> _")
0244 C
0245      END
0246 END$

```

2CNVRT T=00004 IS ON CR00015 USING 00010 BLKS R=0068

```
0001  FTN4
0002      SUBROUTINE CNVRT (VALUE,KVALUE)
0003  C
0004  C LEVEL 6
0005  C
0006  C CNVRT IS ACCESSED BY FIXLN TO CONVERT 'VALUE', A REAL
0007  C NUMBER IN THE RANGE 0 - 100, TO A CHARACTER STRING
0008  C REPRESENTATION OF THAT VALUE ('KVALUE')
0009  C
0010  C THE CALLING SEQUENCE IS :
0011  C
0012  C      CALL CNVRT(VALUE,KVALUE)
0013  C
0014  C WHERE
0015  C
0016  C      VALUE IS THE VALUE TO BE CONVERTED
0017  C      KVALUE IS THE CHARACTER STRING ARRAY
0018  C
0019  C 'INDEX' CONTAINS THE CHARACTER REPRESENTATIONS OF THE DIGITS 0-9
0020  C 'VAL' IS ASSIGNED THE VALUE OF 'VALUE' SO THAT 'VALUE' DOESN'T CHANGE
0021  C 'KVAL' IS THE CURRENT DIGIT BEING HANDLED
0022  C
0023  C THIS ROUTINE WAS WRITTEN BY GREEN
0024  C
0025  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0026  C
0027      INTEGER KVALUE(6),INDEX(10)
0028      DATA INDEX/1H0,1H1,1H2,1H3,1H4,1H5,1H6,1H7,1H8,1H9/
0029  C
0030  C      FILL 'KVALUE' WITH BLANKS
0031      DO 10 K=1,6
0032          KVALUE(K)=1H
0033  10 CONTINUE
0034  C      IF 'VALUE' IS ZERO, WE'RE DONE.
0035  C      OTHERWISE, SET 'VAL' AND FIX THE DECIMAL.
0036      IF(VALUE.EQ.0.) RETURN
0037      KVALUE(4)=1H.
0038      VAL = VALUE
0039  C      IF 'VAL' IS 100, WE NEED 6 CELLS
0040      IF(VAL.NE.100.) GOTO 20
0041          KVALUE(1)=1H1
0042          DO 15 K=2,6
0043              IF(KVALUE(K).EQ.1H ) KVALUE(K)=1H0
0044  15      CONTINUE
0045          RETURN
0046  C      START WITH THE 'TENS' PLACE
0047  20 KVAL=IFIX(VAL/10.)
0048      KVALUE(2)=INDEX(KVAL+1)
0049      IF(KVAL.EQ.0) GOTO 25
0050      VAL = VAL - FLOAT(KVAL*10)
0051  C      NOW DO THE 'ONES' PLACE
0052  C      TAKE CARE OF BINARY MISREPRESENTATION
0053  25 KVAL=IFIX(VAL)
0054      KVALUE(3)=INDEX(KVAL+1)
```

```

0055      IF(KVAL.EQ.0) GOTO 30
0056      VAL = (VAL - FLOAT(KVAL) + .00005) * 10.
0057      GOTO 35
0058 30 VAL = VAL * 10. + .00005
0059 C      NOW THE 'TENTHS' PLACE
0060 35 KVAL=IFIX(VAL)
0061      KVALUE(5)=INDEX(KVAL+1)
0062      IF(KVAL.EQ.0) GOTO 40
0063      VAL = (VAL - FLOAT(KVAL)) * 10.
0064      GOTO 45
0065 40 VAL = VAL * 10.
0066 C      FINALLY, THE 'HUNDRETHS' PLACE AND RETURN
0067 45 KVALUE(6)=INDEX(IFIX(VAL)+1)
0068      RETURN
0069      END
0070 END$

```



8CTIL T=00004 IS ON CR00015 USING 00004 BLKS R=0000

```
0001 FTN4
0002 C
0003 C      ** LABEL COMMON CTIL (CATEGORY TITLES) **
0004 C
0005      BLOCK DATA CTIL
0006      COMMON /CTIL/ ICAT
0007      INTEGER ICAT (10,12)
0008      DATA ICAT /
0009      >  2HGE,2HCL,2HTO,2HSU,2HOU,2HSU,2HGR,2HVE,2HAN,2HSO,
0010      >  2HNE,2HIM,2HPS,2HBS,2HER,2HRF,2HOU,2HGE,2HIM,2HCI,
0011      >  2HRA,2HAT,2HOI,2HOI,2HBU,2HAC,2HND,2HTA,2HAL,2HO-,
0012      >  2HL ,2HOL,2HL ,2HL ,2HRD,2HE ,2H W,2HTI,2HS ,2HEC,
0013      >  2HDE,2HOG,2H ,2H ,2HEN,2HWA,2HAT,2HON,2H ,2HON,
0014      >  2HSC,2HY ,2H ,2H ,2H ,2HTE,2HER,2H ,2H ,2HOM,
0015      >  2HRI,2H ,2H ,2H ,2H ,2HR ,2H H,2H ,2H ,2HIC,
0016      >  2HPT,2H ,2H ,2H ,2H ,2HHY,2HYD,2H ,2H ,2HS ,
0017      >  2HIO,2H ,2H ,2H ,2H ,2HUR,2HRO,2H ,2H ,2H ,
0018      >  2HN ,2H ,2H ,2H ,2H ,2HOL,2HLO,2H ,2H ,2H ,
0019      >  2H ,2H ,2H ,2H ,2H ,2HOG,2HGY,2H ,2H ,2H ,
0020      >  2H ,2H ,2H ,2H ,2H ,2HY ,2H ,2H ,2H ,2H /
0021      END
0022      END$
```

&DCDS1 T=00004 IS ON CR00015 USING 00069 BLKS R=0000

```
0001  FTN4
0002  C ===== SUBROUTINE DCDS1 =====
0003  C =
0004  C =          DISPLAY CURRENT DATA SET (SEGMENT ONE)
0005  C =
0006  C =  SOURCE FILE:  &DCDS1                OBJECT FILE: %DCDS1
0007  C =====
0008  C
0009  C
0010  C DESCRIPTION:
0011  C
0012  C          DCDS1 DISPLAYS THE CURRENT DATA FOR CATEGORIES 1 THROUGH 5
0013  C          DCDS1 IS SCHEDULED THROUGH CLAIM SWAP CONTROL VIA PROGRAM DCDSX
0014  C
0015  C CALLING SEQUENCE:
0016  C
0017  C          CALL DCDS1
0018  C
0019  C ARGUMENTS:  NONE
0020  C
0021  C ACCESSED BY:
0022  C
0023  C          CLAIM
0024  C          RCLAM (SEAMPLAN)
0025  C
0026  C SUBROUTINES SCHEDULED:
0027  C
0028  C          ERASE  (TCS)
0029  C          HOME   (TCS)
0030  C          OTSPL  (SYS)
0031  C
0032  C LABEL COMMON DECLARATIONS :
0033  C
0034  C          ALTRN
0035  C
0036  C LOCAL VARIABLES:
0037  C
0038  C          STARTn -> STARTING WORD FOR TEXTEC ARRAY (n => CATEGORY #)(INTEGER)
0039  C          STOPn  -> END WORD FOR TEXTEC ARRAY (INTEGER)
0040  C          CHNG   -> HEADING LETTER CHANGES (INTEGER)
0041  C          LU     -> LU RETURN BY OTSPL
0042  C
0043  C AUTHOR:          ORVILLE D. GREEN
0044  C
0045  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0046  C
0047  C
0048  C =====
0049  C
0050  C
0051  C          SUBROUTINE DCDS1
0052  C
0053  C
0054  C          TEKTRONIX COMMON
```

```

0055 C
0056 COMMON ITEK (45)
0057 C
0058 C LOGICAL UNITS AND COMMON LOCATION
0059 C
0060 COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0061 C
0062 C POINTERS
0063 C
0064 COMMON EXIT ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0065 COMMON IOPTN ,IOVR(7),IPNTR ,ISOC(6),ISUB(8)
0066 COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT ,LUO
0067 COMMON MODE ,NANM ,NCLI ,NGEN ,NGRW
0068 COMMON NOVR ,NSECTS ,NSOC ,NSUB ,NSUR
0069 COMMON NTOF ,NU ,NVEG
0070 C
0071 C GRADING PARAMETERS
0072 C
0073 COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCPA(5)
0074 COMMON GROUBS(5),HWHT(5,10),HWSL1(5,10),NSFP(5),PCEQ19(4)
0075 COMMON PERCNT(5,10),REHCPY(5),REHVOL(5),SLOPE(5,10),WBP
0076 C
0077 C CATEGORY TEXT
0078 C
0079 COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0080 COMMON OVRBD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0081 COMMON TPSL(49,13),VGTA(15,13)
0082 C
0083 C EXPECTATION VALUES
0084 C
0085 COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0086 COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0087 COMMON TOPSOI(33,6),VEGETA(10,6)
0088 C
0089 C CATEGORY RESPONSES
0090 C
0091 COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0092 COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0093 COMMON RTOPSO(9),RVEGET(2)
0094 C
0095 C FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0096 C
0097 COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHM
0098 COMMON CABS(2),CAC,CACP,CADF,CADH
0099 COMMON CADS,CAEAF,CAHSAP,CAHSTS,CAIP
0100 COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0101 COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0102 COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0103 C
0104 INTEGER EXIT,CLMA,GDES,GWHY,OVRBD,SBSL
0105 INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0106 INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0107 INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0108 INTEGER VEGETA,ANIMAL
0109 INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0110 INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA

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```

0111      INTEGER RCLTEC,TTL
0112 C
0113      INTEGER COMMON (1)
0114      EQUIVALENCE (COMMON (1), ITEK (1))
0115      EQUIVALENCE (IARRY (1), LUT)
0116      EQUIVALENCE (IARY2 (1), ISTRK)
0117      EQUIVALENCE (IARY2 (2), ISECT)
0118      EQUIVALENCE (IARY2 (3), ICODE)
0119      EQUIVALENCE (IARY2 (4), LEN)
0120 C
0121      LOGICAL LER
0122 C
0123      COMMON /ALTRN/ ALTN
0124      INTEGER START1(3),START2(2),START3(9),START4(7),START5(5)
0125      INTEGER STOP1(3),STOP2(2),STOP3(9),STOP4(7),STOP5(5)
0126      INTEGER CHNG (8), ALTN (6,4)
0127      DIMENSION LINE (74)
0128 C
0129      DATA START1 /1,5,10 /
0130      DATA START2 /1,8 /
0131      DATA START3 /1,7,12,19,24,28,34,40,45 /
0132      DATA START4 /12,19,24,28,34,40,45 /
0133      DATA START5 /24,28,34,40,45 /
0134 C
0135      DATA STOP1 /2,6,12 /
0136      DATA STOP2 /3,9 /
0137      DATA STOP3 /2,8,12,20,25,28,35,41,46 /
0138      DATA STOP4 /12,20,25,28,35,41,46 /
0139      DATA STOP5 /25,28,35,41,46 /
0140 C
0141      DATA CHNG/2H A,2H B,2H C,2H D,2H E,2H F,2H G,2H H/
0142 C
0143 C      SPOOL OUTPUT
0144 C
0145      IF (LUL .EQ. LUT) GOTO 1
0146      CALL OTSPL (LU, 1)
0147      IF (LU .LT. 0) GOTO 5000
0148      LUL = LU
0149 C
0150      1 IF (.NOT. LER .OR. LUL .NE. LUT) GOTO 2
0151      CALL ERASE
0152      CALL HOME
0153      KPASS=0
0154 C
0155 C      GENERAL DESCRIPTION CATEGORY
0156 C
0157      2 WRITE (LUL, 1000) TTL
0158      WRITE (LUL, 1001)
0159      IPLACE = 0
0160          IF(RGENDE(1).EQ.0) WRITE (LUL,1900)
0161          IF(RGENDE(1).EQ.0) CALL BELL
0162          IF(RGENDE(1).EQ.0) CALL TINPT(ICHAR)
0163          IF(RGENDE(1).EQ.0) GOTO 100
0164      DO 10 JJ=1,NGEN
0165          IF(RGENDE(JJ).EQ.0) WRITE (LUL,2000)
0166          IF(RGENDE(JJ).EQ.0) CALL BELL

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0167         IF(RGENDE(JJ).EQ.0) CALL TINPT(ICHAR)
0168         IF(RGENDE(JJ).EQ.0) GOTO 100
0169      8 WRITE(LUL,1010) ((GDES(K,1),I=1,13),K=START1(JJ),STOP1(JJ))
0170         WRITE(LUL,1020) (GDES(RGENDE(JJ)+STOP1(JJ),I),I=1,13),
0171      &          (GENDES(RGENDE(JJ)+IPLACE,I),I=1,6)
0172    10 IPLACE = IPLACE + IGEN(JJ)
0173         WRITE(LUL,1030) CSTES
0174         WRITE(LUL,1002)
0175         IF (LUL .EQ. LU) GOTO 15
0176         WRITE (LUT,1035)
0177         READ (LUT,1036) IANS
0178         IF (IANS .EQ. 1HX) GOTO 5000
0179         IF (LER) CALL ERASE
0180         IF (LER) CALL HOME
0181 C
0182 C         OUTPUT THE APPROPRIATE GRADING VARIABLES
0183 C
0184    15 GOTO (20,75) RGENDE (1)
0185 C
0186 C         DRAGLINE MINE
0187 C
0188    20 GOTO (30,40,50) RGENDE (2)
0189 C
0190 C         OPENING CUT / DRAGLINE MINE
0191 C
0192    30 WRITE (LUL,1040) (GRDVBS (I), I = 1, 4), COGO
0193         GOTO 55
0194 C
0195 C         MINE RUN / DRAGLINE MINE
0196 C
0197    40 WRITE (LUL,1050) (GRDVBS (I), I = 1, 4), COGO
0198         GOTO 55
0199 C
0200 C         FINAL CUT / DRAGLINE MINE
0201 C
0202    50 WRITE (LUL,1060) BY, GRDVBS,COGO
0203    55 IF (LUL .EQ. LU) GOTO 60
0204         WRITE (LUT,1035)
0205         READ (LUT,1036) IANS
0206         IF (IANS .EQ. 1HX) GOTO 5000
0207 C
0208    60 IF (LUL .EQ. LUT .AND. LER) CALL ERASE
0209         IF (LUL .EQ. LUT .AND. LER) CALL HOME
0210         IF (LUL .EQ. LU) WRITE (LUL,62)
0211         WRITE (LUL,2010) ((ALTN(K,J),J=1,4),K=1,5)
0212         KPAIR=1
0213    61 CALL FIXLN(SLOPE,PERCNT,NSPP,KPAIR,LINE)
0214         WRITE(LUL,2011) LINE
0215         DO 63 I=1,5
0216             IF(NSPP(I).LE.KPAIR) GOTO 63
0217             KPAIR = KPAIR + 1
0218             GOTO 61
0219    63 CONTINUE
0220         WRITE (LUL,2012)
0221         IF (LUL .EQ. LU) GOTO 100
0222         WRITE (LUT,1035)

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0223      READ (LUT,1036) IANS
0224      IF (IANS .EQ. 1HX) 5000, 100
0225  C
0226  C      TRUCK AND SHOVEL TYPE MINE
0227  C
0228      75 DO 95 LUO = 1, 5
0229          IF (NSPF(LUO).EQ.0) GOTO 95
0230          WRITE (LUL,77) (ALTN (LUO,J),J=1,4)
0231          DO 78 I = 1, NSPF (LUO)
0232      78 WRITE (LUL,79) I, HWSL1 (LUO,I),HWHT (LUO,I),BENWI (LUO,1),
0233          *      BENLEN (LUO,I)
0234          WRITE (LUL,80) COGO,AREA (LUO),REHVOL (LUO),REHCFY (LUO)
0235          WRITE (LUL,82)
0236          DO 85 I = 1, NSPF (LUO)
0237      85 WRITE (LUL,86) I, SLOPE (LUO,I),PERCNT (LUO,I)
0238          IF (LUL .EQ. LU) GOTO 95
0239          WRITE (LUT,1035)
0240          READ (LUT,1036) IANS
0241          IF (IANS .EQ. 1HX) GOTO 5000
0242          IF (LER) CALL ERASE
0243          IF (LER) CALL HOME
0244      95 CONTINUE
0245  C
0246  C      CLIMATOLOGY CATEGORY
0247  C
0248      100 IF (LUL .EQ. LUT .AND. LER) CALL ERASE
0249          IF (LUL .EQ. LUT .AND. LER) CALL HOME
0250          WRITE (LUL,1000) TTL
0251          WRITE (LUL,1001)
0252          IPLACE = 0
0253          DO 110 JJ=1,NCLI
0254              IF(RCLIMA(JJ).EQ.0) GOTO 5000
0255      107 WRITE (LUL,1010) ( (CLMA (K,I),I=1,13),K=START2(JJ),STOP2(JJ))
0256          WRITE (LUL,1020) (CLMA (RCLIMA (JJ)+STOP2(JJ),I),I=1,13),
0257          &      (CLIMAT (RCLIMA (JJ)+IPLACE,I),I=1,6)
0258      110 IPLACE = IPLACE + 1CLI (JJ)
0259          WRITE (LUL,1002)
0260          IF (LUL .EQ. LU) GOTO 120
0261          WRITE (LUT,1035)
0262          READ (LUT,1036) IANS
0263          IF (IANS .EQ. 1HX) GOTO 5000
0264          IF (LER) CALL ERASE
0265          IF (LER) CALL HOME
0266  C
0267  C      TOPSOIL CATEGORY
0268  C
0269      120 WRITE (LUL,1000) TTL
0270          WRITE (LUL,1001)
0271          IPLACE = 0
0272          DO 135 JJ=1,NTOP
0273              IF(RTOPSO(JJ).EQ.0) GOTO 5000
0274      130 WRITE (LUL,1010) ( (TPSL (K,I),I=1,13),K=START3(JJ),STOP3(JJ))
0275          WRITE (LUL,1020) (TPSL (RTOPSO (JJ)+STOP3(JJ),I),I=1,13),
0276          &      (TOPSOI (RTOPSO (JJ)+IPLACE,I),I=1,6)
0277          IF (LUL .EQ. LU) GOTO 135
0278          IF (JJ .EQ. 3 .OR. JJ .EQ. 6 .OR. JJ .EQ. 8) 132, 135

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```

0279      132 WRITE (LUT, 1002)
0280          WRITE (LUT, 1035)
0281          READ (LUT, 1036) IANS
0282          IF (IANS .EQ. 1HX) GOTO 5000
0283          IF (LER) CALL ERASE
0284          IF (LER) CALL HOME
0285          WRITE (LUT, 1000) TTL
0286          WRITE (LUT, 1001)
0287          WRITE (LUT, 1010) (TPSL (1,I), 1 = 1, 13)
0288      135 IPLACE = IPLACE + ITOP (JJ)
0289          WRITE (LUL,1100) CSTRM,CSTRP,THKTS
0290          WRITE (LUL,1002)
0291          IF (LUL .EQ. LU) GOTO 140
0292          WRITE (LUT,1035)
0293          READ (LUT,1036) IANS
0294          IF (IANS .EQ. 1HX) GOTO 5000
0295          IF (LER) CALL ERASE
0296          IF (LER) CALL HOME
0297      C
0298      C      SUBSOIL CATEGORY
0299      C
0300      140 WRITE (LUL,1000) TTL
0301          WRITE (LUL,1001)
0302          IPLACE = 0
0303              IF(RSUBSO(1).EQ.0) GOTO 5000
0304          WRITE (LUL,1010) (SBSL (I),I=1,13)
0305          WRITE (LUL,1010) (TPSL (2,I),I=1,13)
0306          WRITE (LUL,1020) (TPSL (RSUBSO (1)+2,I),I=1,13),
0307      &              (SUBSOI (RSUBSO (1),I),I=1,6)
0308          DO 150 JJ=2,NSUB
0309              IF(RSUBSO(JJ).EQ.0) GOTO 5000
0310          WRITE (LUL,1015) CHNG (JJ), (TPSL (START4(JJ-1),I),I=2,13)
0311          IF (START4(JJ-1) .EQ. STOP4(JJ-1)) GOTO 148
0312          WRITE(LUL,1010)((TPSL(K,I),I=1,13),K=START4(JJ-1)+1,STOP4(JJ-1))
0313      148 WRITE (LUL,1020) (TPSL (RSUBSO (JJ)+STOP4(JJ-1),I),I=1,13),
0314      &              (SUBSOI (RSUBSO (JJ)+IPLACE,I),I=1,6)
0315          IF (LUL .EQ. LU) GOTO 150
0316          IF (JJ .EQ. 3 .OR. JJ .EQ. 6) 149, 150
0317      149 WRITE (LUT, 1002)
0318          WRITE (LUT, 1035)
0319          READ (LUT, 1036) IANS
0320          IF (IANS .EQ. 1HX) GOTO 5000
0321          IF (LER) CALL ERASE
0322          IF (LER) CALL HOME
0323          WRITE (LUT, 1000) TTL
0324          WRITE (LUT, 1001)
0325          WRITE (LUT, 1010) (SBSL (I), I = 1,13)
0326      150 IPLACE = IPLACE + ISUB (JJ)
0327          WRITE (LUL,1002)
0328          IF (LUL .EQ. LU) GOTO 160
0329          WRITE (LUT,1035)
0330          READ (LUT,1036) IANS
0331          IF (IANS .EQ. 1HX) GOTO 5000
0332          IF (LER) CALL ERASE
0333          IF (LER) CALL HOME
0334      C

```

```

0335 C      OVERBURDEN CATEGORY
0336 C
0337 160 IF(ROVRBD(1,1).EQ.0) GOTO 5000
0338 DO 180 KK=1,NU
0339 IPLACE = 0
0340 WRITE (LUL,1000) TTL
0341 WRITE (LUL,1001)
0342 WRITE (LUL,1120) KK
0343 WRITE (LUL,1010) ( (OVBD (K,I),I=1,13),K=1,3)
0344 WRITE (LUL,1020) (OVBD (ROVRBD (1,KK)+3,I),I=1,13),
0345 & (OVRBDN (ROVRBD (1,KK),I),I=1,6)
0346 WRITE (LUL,1130) THICK (KK)
0347 IF(ROVRBD(2,KK).EQ.0) GOTO 5000
0348 WRITE (LUL,1010) ( (OVBD (K,I),I=1,13),K=8,10)
0349 WRITE (LUL,1020) (TPSL (ROVRBD (2,KK)+12,I),I=1,13),
0350 & (OVRBDN (ROVRBD (2,KK)+IOVR (1),I),I=1,6)
0351 DO 170 JJ=3,NOVR
0352 IF(ROVRBD(JJ,KK).EQ.0) GOTO 5000
0353 WRITE (LUL,1015) CHNG (JJ+1), (TPSL (START5(JJ-2),I),I=2,13)
0354 IF (START5(JJ-2) .EQ. STOP5(JJ-2)) GOTO 167
0355 WRITE(LUL,1010)((TPSL(K,I),I=1,13),K=START5(JJ-2)+1,STOP5(JJ-2))
0356 167 WRITE(LUL,1020) (TPSL(ROVRBD(JJ,KK)+STOP5(JJ-2),I),I=1,13),
0357 & (OVRBDN (ROVRBD (JJ,KK)+IPLACE,I),I=1,6)
0358 IF (LUL .EQ. LU) GOTO 170
0359 IF (JJ .EQ. 3 .OR. JJ .EQ. 6) 168, 170
0360 168 WRITE (LUT, 1002)
0361 WRITE (LUT, 1035)
0362 READ (LUT, 1036) IANS
0363 IF (IANS .EQ. 1HX) GOTO 5000
0364 IF (LER) CALL ERASE
0365 IF (LER) CALL HOME
0366 WRITE (LUT, 1000) TTL
0367 WRITE (LUT, 1001)
0368 WRITE (LUT, 1010) (OVBD (1,I),I = 1, 13)
0369 170 IPLACE = IPLACE + IOVR (JJ)
0370 WRITE (LUL,1002)
0371 IF (LUL .EQ. LU) GOTO 180
0372 WRITE (LUT,1035)
0373 READ (LUT,1036) IANS
0374 IF (IANS .EQ. 1HX) GOTO 5000
0375 IF (LER) CALL ERASE
0376 IF (LER) CALL HOME
0377 180 CONTINUE
0378 KPASS = 1
0379 C
0380 C      QUIT OTSPL AND RETURN
0381 C
0382 5000 IF(KPASS.EQ.0.AND.IANS.NE.1HX) WRITE (LUL,2001)
0383 IF(IANS.EQ.2HX .OR.KPASS.EQ.0) EXIT = -1
0384 IF (LUL .EQ. LUT) GOTO 5001
0385 CALL OTSPL (LU,2)
0386 RETURN
0387 5001 IF(KPASS.EQ.0.AND.IANS.NE.1HX) CALL BELL
0388 IF(KPASS.EQ.0.AND.IANS.NE.1HX) CALL TINPT (ICHAR)
0389 RETURN
0390 C

```



```

0391 C      FORMAT STATEMENTS
0392 C
0393 1000 FORMAT (1H1,
0394      &1X,40A2,/,
0395      &1X"*** LIST OF RESPONSES TO ENVIRONMENTAL"1X
0396      &"FEASIBILITY CATEGORIES ***")
0397 C
0398 1001 FORMAT (      /,10X" RESPONSE      "12X"EXPECTATION"1X
0399      &"OF SUCCESS VALUES"/,
0400      &      10X"-----"12X"-----"1X
0401      &"-----"/,
0402      >32X"/CROP/NAT./WILD/WAT./HIGH/OTHER"/,
0403      >32X"/LAND/VEG./LIFE/REC./USE /      /"/
0404      >1X,73 ("=")/)
0405 C
0406 1010 FORMAT (4X,13A2)
0407 C
0408 1020 FORMAT (1X"***"1X,13A2,5X,I1,5 (4X,I1)/)
0409 C
0410 1030 FORMAT (///,4X"AVERAGE COST TO EXCAVATE SPOIL : "F13.2,1X
0411      &"CENTS PER CUBIC YARD")
0412 C
0413 1002 FORMAT (/,1X,73 ("="))
0414 C
0415 1035 FORMAT (1X"ENTER C TO CONTINUE, X TO EXIT -> _")
0416 C
0417 1036 FORMAT (1A1)
0418 C
0419 1040 FORMAT (1H1,3/,25X"---DRAGLINE/OPENING CUT---"3/,
0420      &5X"HEIGHT OF THE SPOIL BANK IS      : "F10.2" FEET"/,
0421      &5X"AVERAGE SLOPE OF THE SPOIL IS      : "F10.2" DEGREES"/,
0422      &5X"LENGTH OF THE SPOIL BANK IS      : "F10.2" YARDS"/,
0423      &5X"GENERAL SLOPE OF THE AREA IS      : "F10.2" DEGREES"/,
0424      &5X"COST OF GRADING OVERBURDEN IS      : "F10.2,1X
0425      &"CENTS/CU.YD")
0426 C
0427 1050 FORMAT (1H1,///,25X"---DRAGLINE/MINE RUN---"///,
0428      &      10X"DIST. BETWEEN SPOIL BANK PEAKS IS:"F10.2,1X
0429      &"FEET"/,
0430      &      10X"INITIAL SLOPE OF THE SPOIL IS      : "F10.2,1X
0431      &"DEGREES"/,
0432      &      10X"TOTAL AREA COVERED BY SPOILS IS : "F10.2,1X
0433      &"ACRES"/,
0434      &      10X"GENERAL SLOPE OF THE AREA IS      : "F10.2,1X
0435      &"DEGREES"/,
0436      &      10X"COST OF GRADING OVERBURDEN IS      : "F10.2,1X
0437      >"CENTS / CU. YD")
0438 C
0439 1060 FORMAT (1H1,///,25X"---DRAGLINE/FINAL CUT---"///,
0440      &      10X"WIDTH OF BOTTOM OF THE PIT      : "F10.2,1X
0441      &"FEET"/,
0442      &      10X"TOTAL LENGTH OF THE PIT      : "F10.2,1X
0443      &"YARDS"/,
0444      &      10X"HEIGHT OF THE HIGHWALL      : "F10.2,1X
0445      &"FEET"/,
0446      &      10X"HEIGHT OF THE SPOIL BANK      : "F10.2,1X

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0447      &'FEET'//,
0448      &      10X'SLOPE OF THE HIGHWALL      : 'F10.2,1X
0449      &'DEGREES'//,
0450      &      10X'SLOPE OF THE SPOIL BANK      : 'F10.2,1X
0451      &'DEGREES'//,
0452      &      10X'COST OF GRADING OVERBURDEN : 'F10.2,1X
0453      &'CENTS PER CUBIC YARD')
0454 C
0455      62 FORMAT (1H1)
0456 C
0457 C
0458      66 FORMAT (/ ,2X,4A2)
0459 C
0460      68 FORMAT (16X,F6.2,1X'/'1X,F5.2)
0461 C
0462      77 FORMAT (1H1,10X'*** TRUCK & SHOVEL MINE : '4A2'***'//,
0463      *1X'NO.'4X'HIGHWALL SLOPE'2X'HIGHWALL HEIGHT'2X
0464      *'BENCH WIDTH'2X'BENCH LENGTH')
0465 C
0466      79 FORMAT (1X'*'I2,3X'*'F10.2,3 (5X'*'F10.2)/)
0467 C
0468      80 FORMAT (/ ,66 ('-'),/,
0469      *2X'*' COST OF GRADING OVERBURDEN      : 'F10.2,1X
0470      *'CENTS/CUBIC YARD'/,
0471      *2X'*' AREA COVERED BY UNGRADED SPOILS : 'F10.2,1X
0472      *'ACRES'/,
0473      *2X'*' REHANDLE VOLUME                  : 'F10.2,1X
0474      *'CUBIC YARDS'/,
0475      *2X'*' REHANDLE COST                    : 'F10.2,1X
0476      *'CENTS/CUBIC YARD'/,66 ('-'),/)
0477 C
0478      82 FORMAT (1X'NO.'4X'FINAL HIGHWALL SLOPE'2X'FINAL TERRACE WIDTH'/)
0479 C
0480      86 FORMAT (1X'*'I2,6X'*'F10.2,7X'*'F10.2)
0481 C
0482      1100 FORMAT (/ ,10X'COST TO REMOVE TOPSOIL      : 'F10.2,1X
0483      &'CENTS PER CUBIC YARD'/,
0484      &      10X'COST TO RESPREAD TOPSOIL : 'F10.2,1X
0485      &'CENTS PER CUBIC YARD'/,
0486      &      10X'THICKNESS OF TOPSOIL      : 'F10.2,1X
0487      &'INCHES')
0488 C
0489      1015 FORMAT (4X,A2,12A2)
0490 C
0491      1120 FORMAT (2/,30X'OVERBURDEN : LITHOLOGIC UNIT #'I2)
0492 C
0493      1130 FORMAT (/ ,4X' B.) THICKNESS OF THIS UNIT : 'F10.2' FEET'
0494      &/)
0495 C
0496      1125 FORMAT ( / ,10X'AVERAGE OVERBURDEN RESPONSES'/)
0497 C
0498      1900 FORMAT(1X'-----GENERAL DESCRIPTION NOT ENTERED-----')
0499      2000 FORMAT(1X'-----END OF GENERAL DESCRIPTION RESPONSES-----')
0500      2001 FORMAT(1X'-----END OF ENVIRONMENTAL DATA ENTRIES-----')
0501      2010 FORMAT(/24X'CURRENT SLOPE-PERCENT PAIRS'/
0502      >      24X'=====')

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```
0503      > 5(3X,4A2,4X)/
0504      > 5(1X"SLOPE-PERCENT"1X)/
0505      > 5(1X"-----"1X)/
0506  2011  FORMAT(74A1)
0507  2012  FORMAT(74( '='))
0508      END
0509  END$
```

&DCDS2 T=00004 IS ON CR00015 USING 00053 BLKS R=0000

```
0001  FTN4
0002  C ===== SUBROUTINE  DCDS2 =====
0003  C =
0004  C =          DISPLAY CURRENT DATA SET - SEGMENT TWO
0005  C =
0006  C = SOURCE FILE : &DCDS2          OBJECT FILE : %DCDS2
0007  C =====
0008  C
0009  C
0010  C DESCRIPTION:
0011  C
0012  C          DCDS2 DISPLAYS THE RESPONSES TO CATEGORIES 6 - 10.
0013  C          DCDS2 IS SCHEDULED THROUGH CLAIM SWAP CONTROL VIA PROGRAM DCDS0
0014  C
0015  C CALLING SEQUENCE:
0016  C
0017  C          CALL DCDS2
0018  C
0019  C ARGUMENTS:
0020  C
0021  C          NONE
0022  C
0023  C ACCESSED BY:
0024  C
0025  C          CLAIM
0026  C          RCLAM (SEAMPLAN)
0027  C
0028  C SUBROUTINES SCHEDULED:
0029  C
0030  C          ERASE (TCS)
0031  C          HOME  (TCS)
0032  C          OTSPL (SYS)
0033  C
0034  C LOCAL VARIABLES:
0035  C
0036  C          SAME AS FOR DCDS1
0037  C
0038  C
0039  C AUTHOR:          ORVILLE D. GREEN
0040  C
0041  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0042  C
0043  C
0044  C =====
0045  C
0046  C
0047  C          SUBROUTINE DCDS2
0048  C
0049  C
0050  C          TEKTRONIX COMMON
0051  C
0052  C          COMMON ITEK (45)
0053  C
0054  C          LOGICAL UNITS AND COMMON LOCATION
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0055 C
0056 COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0057 C
0058 C POINTERS
0059 C
0060 COMMON EXIT ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0061 COMMON IOPTN ,IOVR(7),IPNTR ,ISOC(6),ISUB(8)
0062 COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT ,LUO
0063 COMMON MODE ,NANM ,NCLI ,NGEN ,NGRW
0064 COMMON NOVR ,NSECTS ,NSOC ,NSUB ,NSUR
0065 COMMON NTOP ,NU ,NVEG
0066 C
0067 C GRADING PARAMETERS
0068 C
0069 COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCPA(5)
0070 COMMON GROVBS(5),HWHT(5,10),HWSLI(5,10),NSPF(5),PCEQ19(4)
0071 COMMON PERCNT(5,10),REHCPY(5),REHVOL(5),SLOPE(5,10),WBP
0072 C
0073 C CATEGORY TEXT
0074 C
0075 COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0076 COMMON OVBD(11,13),SBSL(13), SCEC(33,13),SWHY(44,13)
0077 COMMON TP5L(49,13),VGTA(15,13)
0078 C
0079 C EXPECTATION VALUES
0080 C
0081 COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0082 COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0083 COMMON TOPSOI(33,6),VEGETA(10,6)
0084 C
0085 C CATEGORY RESPONSES
0086 C
0087 COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0088 COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0089 COMMON RTOPSO(9),RVEGET(2)
0090 C
0091 C FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0092 C
0093 COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHM
0094 COMMON CABS(2),CAC,CACP,CADF,CADH
0095 COMMON CADS,CAEAF,CAHSAF,CAHSTS,CAIF
0096 COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0097 COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0098 COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0099 C
0100 INTEGER EXIT,CLMA,GDES,GWHY,OVBD,SBSL
0101 INTEGER SCEC,SWHY,TP5L,VGTA,ANIM
0102 INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0103 INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0104 INTEGER VEGETA,ANIMAL
0105 INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0106 INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0107 INTEGER RCLTEC,TTL
0108 C
0109 INTEGER COMMON (1)
0110 EQUIVALENCE (COMMON (1), ITEK (1))

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0111      EQUIVALENCE (IARRY (1), LUT)
0112      EQUIVALENCE (IARY2 (1), ISTRK)
0113      EQUIVALENCE (IARY2 (2), ISECT)
0114      EQUIVALENCE (IARY2 (3), ICODE)
0115      EQUIVALENCE (IARY2 (4), LEN)
0116      C
0117      LOGICAL LER
0118      C
0119      C
0120      INTEGER CHNG(8)
0121      INTEGER START6(5),START7(2),START0(4)
0122      INTEGER STOP6(5),STOP7(2),STOP0(4)
0123      C
0124      DATA START6/11,25,29,33,39/
0125      DATA START7/33,39/
0126      DATA START0/17,24,27,30/
0127      DATA STOP6/19,25,29,34,40/
0128      DATA STOP7/34,40/
0129      DATA STOP0/17,26,29,33/
0130      DATA CHNG/2H A,2H B,2H C,2H D,2H E,2H F,2H G,2H H/
0131      C
0132      C      SPOOL OUTPUT
0133      C
0134      IF (LUL .EQ. LUT) GOTO 1
0135      CALL OTSPL (LU, 1)
0136      IF (LU .LT. 0) GOTO 5000
0137      C
0138      LUL = LU
0139      C
0140      C
0141      1 IF (.NOT. LER .OR. LUL .NE. LUT) GOTO 210
0142      CALL ERASE
0143      CALL HOME
0144      KPASS=0
0145      C
0146      C      SURFACE WATER HYDROLOGY CATEGORY
0147      C
0148      210 IF(RSURHY(1).EQ.0) GOTO 5000
0149      WRITE (LUL,1000) TTL
0150      WRITE (LUL,1001)
0151      WRITE (LUL,1010) ( (SWHY (K,I),I=1,13),K=1,5)
0152      IF (RSURHY (1) .NE. 1) GOTO 214
0153      WRITE (LUL,1010) (SWHY (6,I),I=1,13)
0154      WRITE (LUL,1020) (SWHY (7,1),I=1,13),
0155      & (SURHYD (1,I),I=1,6)
0156      GOTO 215
0157      214 WRITE (LUL,1020) (SWHY (RSURHY (1)+6,I),I=1,13),
0158      & (SURHYD (RSURHY (1),I),I=1,6)
0159      215 IPLACE = 0
0160      DO 225 JJ=2,NSUR
0161      IF(RSURHY(JJ).EQ.0) GOTO 5000
0162      221 WRITE(LUL,1010)((SWHY(K,1),I=1,13),K=START6(JJ-1),STOP6(JJ-1))
0163      WRITE (LUL,1020) (SWHY (RSURHY (JJ)+STOP6(JJ-1),I),I=1,13),
0164      & (SURHYD (RSURHY (JJ)+IPLACE,I),I=1,6)
0165      IF (LUL .EQ. LU) GOTO 225
0166      IF (JJ .EQ. 2 .OR. JJ .EQ. 4) 224, 225

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0167      224 WRITE (LUT, 1002)
0168      WRITE (LUT, 1035)
0169      READ (LUT, 1036) IANS
0170      IF (IANS .EQ. 1HX) GOTO 5000
0171      IF (LER) CALL ERASE
0172      IF (LER) CALL HOME
0173      WRITE (LUT, 1000) TTL
0174      WRITE (LUT, 1001)
0175      WRITE (LUT, 1010) ((SWHY(I,J),J=1,13),I=1,2)
0176      225 IPLACE = IPLACE + 1SUR (JJ)
0177      WRITE (LUL,1002)
0178      IF (LUL .EQ. LU) GOTO 230
0179      WRITE (LUT,1035)
0180      READ (LUT,1036) IANS
0181      IF (IANS .EQ. 1HX) GOTO 5000
0182      IF (LER) CALL ERASE
0183      IF (LER) CALL HOME
0184      C
0185      C      GROUND WATER HYDROLOGY CATEGORY
0186      C
0187      230 IF(RGRWHY(1).EQ.0) GOTO 5000
0188      WRITE (LUL,1000) TTL
0189      WRITE (LUL,1001)
0190      WRITE (LUL,1010) ( (GWHY (K,I),I=1,13),K=1,5)
0191      WRITE (LUL,1020) (GWHY (RGRWHY (1)+5,I),I=1,13),
0192      &                (GRWHYD (RGRWHY (1),1),1=1,6)
0193      IF(RGRWHY(2).EQ.0) GOTO 5000
0194      WRITE (LUL,1010) ( (GWHY (K,1),I=1,13),K=10,18)
0195      WRITE (LUL,1020) (SWHY (RGRWHY (2)+19,I),I=1,13),
0196      &                (GRWHYD (RGRWHY (2)+IGRW (1),I),1=1,6)
0197      IPLACE = 0
0198      IF (LUL.EQ.LUT) WRITE (LUT,1002)
0199      IF (LUL.EQ.LUT) WRITE (LUT,1035)
0200      IF (LUL.EQ.LUT) READ (LUT,1036) IANS
0201      IF (IANS .EQ. 1HX) GOTO 5000
0202      IF (LER) CALL ERASE
0203      IF (LER) CALL HOME
0204      WRITE (LUL,1000) TTL
0205      WRITE (LUL,1001)
0206      DO 235 JJ=3,4
0207      IF(RGRWHY(JJ).EQ.0) GOTO 5000
0208      233 WRITE (LUL,1015) CHNG (JJ), (SWHY (START7(JJ-2),I),I=3,13)
0209      WRITE(LUL,1010)((SWHY(K,I),I=1,13),K=START7(JJ-2)+1,STOP7(JJ-2)
0210      WRITE (LUL,1020) (SWHY (RGRWHY (JJ)+STOP7(JJ-2),1),I=1,13),
0211      &                (GRWHYD (RGRWHY (JJ)+IPLACE,I),I=1,6)
0212      IF (LUL .EQ. LU) GOTO 235
0213      IF (JJ .EQ. 2) 234, 235
0214      234 WRITE (LUT, 1002)
0215      WRITE (LUT, 1035)
0216      READ (LUT, 1036) IANS
0217      IF (IANS .EQ. 1HX) GOTO 5000
0218      IF (LER) CALL ERASE
0219      IF (LER) CALL HOME
0220      WRITE (LUT, 1000) TTL
0221      WRITE (LUT, 1001)
0222      WRITE (LUT, 1010) ((GWHY (1,J), J = 1, 13), 1 = 1,2)

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0223 235 IPLACE = IPLACE + IGRW (JJ)
0224 WRITE (LUL,1010) ( (GWHY (K,1),I=1,13),K=19,20)
0225 WRITE (LUL,1020) (GWHY (RGRWHY (5)+20,I),I=1,13),
0226 & (GRWHYD (RGRWHY (5)+IPLACE,I),I=1,6)
0227 WRITE (LUL,1002)
0228 IF (LUL .EQ. LU) GOTO 240
0229 WRITE (LUT,1035)
0230 READ (LUT,1036) IANS
0231 IF (IANS .EQ. 1HX) GOTO 5000
0232 IF (LER) CALL ERASE
0233 IF (LER) CALL HOME
0234 C
0235 C VEGETATION CATEGORY
0236 C
0237 240 WRITE (LUL,1000) TTL
0238 IPLACE = 0
0239 WRITE (LUL,1001)
0240 WRITE (LUL,1010) (VGTA (1,I),I=1,13)
0241 DO 249 IR = 1, 2
0242 IF (RVEGET (IR).EQ.0) GOTO 5000
0243 IF (IR .EQ. 1) WRITE (LUL,1010) ( (VGTA (K,1),I=1,13),K=2,3)
0244 IF (IR .EQ. 2) WRITE (LUL,1010) (VGTA (14,I),I=1,13)
0245 GOTO (241,242,243,244,247) RVEGET (IR)
0246 241 ISTART = 4
0247 GOTO 245
0248 242 ISTART = 6
0249 GOTO 245
0250 243 ISTART = 6
0251 GOTO 246
0252 244 ISTART = 6
0253 GOTO 246
0254 247 IF (IR .EQ. 2) GOTO 248
0255 ISTART = 11
0256 GOTO 245
0257 248 ISTART = 10
0258 GOTO 246
0259 245 WRITE (LUL,1010) (VGTA (ISTART,I),I=1,13)
0260 IF (RVEGET (IR) .EQ. 1) GOTO 246
0261 WRITE (LUL,1010) (VGTA (ISTART+1,1),I=1,13)
0262 246 WRITE (LUL,1020) (VGTA (RVEGET (IR)+ISTART,I),I=1,13),
0263 & (VEGETA (RVEGET (IR)+IPLACE,I),I=1,6)
0264 IPLACE = IVEG (IR)
0265 249 CONTINUE
0266 WRITE (LUL,1002)
0267 IF (LUL .EQ. LU) GOTO 250
0268 WRITE (LUT,1035)
0269 READ (LUT,1036) IANS
0270 IF (IANS .EQ. 1HX) GOTO 5000
0271 IF (LER) CALL ERASE
0272 IF (LER) CALL HOME
0273 C
0274 C ANIMALS CATEGORY
0275 C
0276 250 IF (RANIMA(1).EQ.0) GOTO 5000
0277 WRITE (LUL,1000) TTL
0278 WRITE (LUL,1001)

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0279 WRITE (LUL,1010) ( (ANIM (K,I),I=1,13),K=1,3)
0280 ISTART = 2 + 2 * RANIMA (1)
0281 IF (RANIMA (1) .EQ. 5) ISTART = ISTART + 2
0282 ISTOP = ISTART + 1
0283 IF (RANIMA (1) .EQ. 4) ISTOP = ISTOP + 3
0284 IPLACE = 0
0285 WRITE (LUL,1010) ( (ANIM (K,I),I=1,13),K=ISTART,ISTOP-1)
0286 WRITE (LUL,1020) (ANIM (ISTOP,I),I=1,13),
0287 & (ANIMAL (RANIMA (1)+IPLACE,I),I=1,6)
0288 WRITE (LUL,1010) (ANIM (1,I),I=1,13)
0289 WRITE (LUL,1010) ( (ANIM (K,1),I=1,13),K=20,21)
0290 IF(RANIMA(2).EQ.0) GOTO 5000
0291 ISTART = 2 + 2 * RANIMA (2)
0292 ISTOP = ISTART + 1
0293 IF (RANIMA (2) .EQ. 4) ISTOP = ISTOP + 3
0294 IF (RANIMA (2) .EQ. 5) ISTART = 22
0295 IF (RANIMA (2) .EQ. 5) ISTOP = 23
0296 IPLACE = IPLACE + IANM (1)
0297 WRITE (LUL,1010) ( (ANIM (K,1),I=1,13),K=ISTART,ISTOP-1)
0298 WRITE (LUL,1020) (ANIM (ISTOP,I),I=1,13),
0299 * (ANIMAL (RANIMA (2)+IPLACE,I),I=1,6)
0300 WRITE (LUL,1010) ( (ANIM (K,I),I=1,13),K=16,17)
0301 IF(RANIMA(3).EQ.0) GOTO 5000
0302 IPLACE= IPLACE + IANM (1) + IANM (2)
0303 WRITE (LUL,1020) (ANIM (RANIMA (3)+17,I),I=1,13),
0304 & (ANIMAL (RANIMA (3)+IPLACE,I),I=1,6)
0305 WRITE (LUL,1002)
0306 IF (LUL .EQ. LU) GOTO 270
0307 WRITE (LUT,1035)
0308 READ (LUT,1036) IANS
0309 IF (IANS .EQ. 1HX) GOTO 5000
0310 IF (LER) CALL ERASE
0311 IF (LER) CALL HOME
0312 C
0313 C SOCIO-ECONOMICS CATEGORY
0314 C
0315 270 IF(RSOCEC(1).EQ.0) GOTO 5000
0316 WRITE (LUL,1000) TTL
0317 WRITE (LUL,1001)
0318 WRITE (LUL,1010) ( (SCEC (K,I),I=1,13),K=1,4)
0319 IPLACE = 0
0320 WRITE (LUL,1020) ( SCEC (RSOCEC (1)+4 ,I),I=1,13),
0321 & (SOCECN (RSOCEC (1)+IPLACE,I),I=1,6)
0322 WRITE (LUL,1010) ( (SCEC (K,1),I=1,13),K=7,8)
0323 IPLACE = IPLACE + ISOC (1)
0324 LL=9
0325 IF (RSOCEC (2).GE.5) LL=10
0326 ISTART = ISTOP
0327 IF (RSOCEC (2) .EQ. 1 .OR. RSOCEC (2) .EQ. 5) ISTOP = ISTART
0328 IF (ISTART .EQ. ISTOP) GOTO 275
0329 WRITE (LUL,1010) (SCEC (RSOCEC (2)+LL-1,I),I=1,13)
0330 275 WRITE (LUL,1020) (SCEC (RSOCEC (2)+LL,I),I=1,13),
0331 & (SOCECN (RSOCEC (2)+IPLACE,I),I=1,6)
0332 IPLACE = 0
0333 DO 310 JJ=3,NSOC
0334 WRITE(LUL,1010)((SCEC(K,I),I=1,13),K=STARTO(JJ-2),STOPO(JJ-2))

```



```

0335      WRITE (LUL,1020) (SCEC (RSOCEC (JJ)+17,I),I=1,13),
0336      &      (SOCECN (RSOCEC (JJ)+IPLACE,1),I=1,6)
0337      IF (LUL .EQ. LU) GOTO 310
0338      IF (JJ .EQ. 3) 308, 310
0339 308 WRITE (LUT, 1002)
0340      WRITE (LUT, 1035)
0341      READ (LUT, 1036) IANS
0342      IF (IANS .EQ. 1HX) GOTO 5000
0343      IF (LER) CALL ERASE
0344      IF (LER) CALL HOME
0345      WRITE (LUT, 1000) TTL
0346      WRITE (LUT, 1001)
0347      WRITE (LUT, 1010) (SCEC (1,J),J = 1, 13)
0348 310 IPLACE = IPLACE + ISOC (JJ)
0349      WRITE (LUL,1002)
0350      IF (LUL .EQ. LU) GOTO 350
0351      WRITE (LUT,1035)
0352      READ (LUT,1036) IANS
0353      IF (IANS .EQ. 1HX) GOTO 5000
0354      IF (LER) CALL ERASE
0355      IF (LER) CALL HOME
0356 350 CONTINUE
0357      KPASS=1
0358 5000 IF(KPASS.EQ.0.AND.IANS.NE.1HX) WRITE(LUT,2000)
0359      IF (LUL .EQ. LUT) GOTO 5001
0360      CALL OTSPL (LU,2)
0361      RETURN
0362 5001 IF(KPASS.EQ.0.AND.IANS.NE.1HX) CALL BELL
0363      IF(KPASS.EQ.0.AND.IANS.NE.1HX) CALL TINPT(1CHAR)
0364      RETURN
0365 C
0366 C      FORMAT STATEMENTS
0367 C
0368 1000 FORMAT (1H1,
0369      &1X,40A2,/
0370      &1X'*** LIST OF RESPONSES TO ENVIRONMENTAL'1X
0371      &'FEASIBILITY CATEGORIES ***')
0372 C
0373 1001 FORMAT (      /,10X"  RESPONSE      "12X"EXPECTATION"1X
0374      &"OF SUCCESS VALUES"/,
0375      &      10X"-----"12X"-----"1X
0376      &"-----"/,
0377      >32X"/CROP/NAT./WILD/NAT./HIGH/OTHER/"/,
0378      >32X"/LAND/VEG./LIFE/REC./USE /      "/"
0379      >1X,73 ("=")//)
0380 C
0381 1010 FORMAT (4X,13A2)
0382 C
0383 1020 FORMAT (1X'***'1X,13A2,5X,I1,5 (4X,I1)/)
0384 C
0385 1002 FORMAT (/,1X,73 ("="))
0386 C
0387 1035 FORMAT (/,1X"ENTER C TO CONTINUE, X TO EXIT -> _")
0388 C
0389 1036 FORMAT (1A1)
0390 C

```



0391 C  
0392 1015 FORMAT (4X,A2,12A2)  
0393 C  
0394 2000 FORMAT(1X"-----END OF ENVIRONMENTAL DATA ENTRIES-----")  
0395 END  
0396 END\$

&DCEV T=00004 IS ON CR00015 USING 00026 BLKS R=0000

```
0001 FTN4
0002 C ===== SUBROUTINE DCEV =====
0003 C =
0004 C = DISPLAY THE CURRENT EXPECTATION VALUES
0005 C =
0006 C = SOURCE FILE : &DCEV OBJECT FILE : %DCEV =
0007 C =====
0008 C
0009 C
0010 C DESCRIPTION:
0011 C
0012 C DCEV DISPLAYS THE CURRENT EXPECTATION OF SUCCESS VALUES ON THE
0013 C LINE PRINTER. OUTPUT IS SPOOLED
0014 C DCEV IS SCHEDULED THROUGH CLAIM SWAP CONTROL VIA PROGRAM DCEVX
0015 C
0016 C CALLING SEQUENCE:
0017 C
0018 C CALL DCEV
0019 C
0020 C ARGUMENTS: NONE
0021 C
0022 C ACCESSED BY:
0023 C
0024 C CLAIM
0025 C RCLAM (SEAMPLAN)
0026 C
0027 C SUBROUTINES SCHEDULED:
0028 C
0029 C OTSPL (SYS)
0030 C
0031 C LOCAL VARIABLES: NONE
0032 C
0033 C
0034 C AUTHOR: STEVEN A. EASTMAN
0035 C
0036 C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0037 C
0038 C
0039 C =====
0040 C
0041 C
0042 C SUBROUTINE DCEV
0043 C
0044 C
0045 C TEKTRONIX COMMON
0046 C
0047 C COMMON ITEK (45)
0048 C
0049 C LOGICAL UNITS AND COMMON LOCATION
0050 C
0051 C COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0052 C
0053 C POINTERS
0054 C
```

```

0055      COMMON EXIT      ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0056      COMMON IOPTN     ,IOVR(7),IPNTR  ,ISOC(6),ISUB(8)
0057      COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT  ,LUO
0058      COMMON MODE      ,NANM      ,NCLI      ,NGEN      ,NGRW
0059      COMMON NOVR      ,NSECTS    ,NSOC      ,NSUR      ,NSUR
0060      COMMON NTOP      ,NU        ,NVEG
0061      C
0062      C      GRADING PARAMETERS
0063      C
0064      COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCFA(5)
0065      COMMON GRDVB(5),HWHT(5,10),HWSLI(5,10),NSPF(5),PCEQ19(4)
0066      COMMON PERCNT(5,10),REHCPY(5),REHVOL(5),SLOPE(5,10),WBP
0067      C
0068      C      CATEGORY TEXT
0069      C
0070      COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0071      COMMON OVRD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0072      COMMON TPSL(49,13),VGTA(15,13)
0073      C
0074      C      EXPECTATION VALUES
0075      C
0076      COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0077      COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0078      COMMON TOPSOI(33,6),VEGETA(10,6)
0079      C
0080      C      CATEGORY RESPONSES
0081      C
0082      COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0083      COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0084      COMMON RTOPSO(9),RVEGET(2)
0085      C
0086      C      FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0087      C
0088      COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHM
0089      COMMON CARS(2),CAC,CACP,CADF,CADH
0090      COMMON CADS,CAEAF,CAHSAF,CAHSTS,CAIF
0091      COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0092      COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0093      COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0094      C
0095      INTEGER EXIT,CLMA,GDES,GWHY,OVRD,SBSL
0096      INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0097      INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0098      INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0099      INTEGER VEGETA,ANIMAL
0100      INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0101      INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0102      INTEGER RCLTEC,TTL
0103      C
0104      INTEGER COMMON (1)
0105      EQUIVALENCE (COMMON (1), ITEK (1))
0106      EQUIVALENCE (IARY1 (1), LUT)
0107      EQUIVALENCE (IARY2 (1), ISTRK)
0108      EQUIVALENCE (IARY2 (2), ISECT)
0109      EQUIVALENCE (IARY2 (3), ICODE)
0110      EQUIVALENCE (IARY2 (4), LEN)

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0111 C
0112 LOGICAL LER
0113 DIMENSION IALPH(15)
0114 C
0115 DATA IALPH / 2HA ,2HB ,2HC ,2HD , 2HE ,
0116 & 2HF ,2HG ,2HH ,2HI ,2HJ ,
0117 & 2HK ,2HL ,2HM ,2HN ,2HO /
0118 C
0119 C
0120 C SPOOL OUTPUT
0121 C
0122 CALL OTSPL (LU, 1)
0123 IF (LU .LT. 0) STOP 1
0124 WRITE(LU,1010)
0125 1010 FORMAT(1H1,/,30X,"LIST OF EXPECTATIONS OF SUCCESS VALUES"//
0126 & 2X"SECTION CATAGORY SELECTION CROP NATIVE "
0127 & " WILDLIFE WATER REC HIGH USE OTHER "//)
0128 C
0129 C CATAGORY 1 : GENERAL DESCRIPTION
0130 C
0131 K=1
0132 KKAT = 1
0133 DO 10 J=1,NGEN
0134 WRITE(LU,1030)
0135 1030 FORMAT(/)
0136 DO 10 L=1,IGEN(J)
0137 WRITE (LU,1000) KKAT,IALPH(J),L, (GENDES(K,I),I=1,6)
0138 1000 FORMAT(4X,I2,11X,A2,10X,I2,2X,6(9X,I2))
0139 K=K+1
0140 10 CONTINUE
0141 C CATAGORY 2: CLIMATOLOGY
0142 K=1
0143 KKAT = 2
0144 DO 20J=1,NCLI
0145 WRITE(LU,1030)
0146 DO 20 L=1,ICLI(J)
0147 WRITE (LU,1000) KKAT,IALPH(J),L, (CLIMAT(K,I),I=1,6)
0148 K=K+1
0149 20 CONTINUE
0150 C CATAGORY 3 TOPSOIL
0151 K=1
0152 KKAT = 3
0153 DO 30 J=1,NTOP
0154 WRITE(LU,1030)
0155 DO 30 L=1,ITOP(J)
0156 WRITE (LU,1000) KKAT,IALPH(J),L, (TOPSOI (K,I), I=1,6)
0157 K=K+1
0158 30 CONTINUE
0159 C CAT 4: SUBSOIL
0160 K=1
0161 KKAT = 4
0162 DO 40 J=1,NSUB
0163 WRITE(LU,1030)
0164 DO 40 L=1, ISUB(J)
0165 WRITE (LU,1000) KKAT,IALPH(J),L, (SUBSOI(K,I),I=1,6)
0166 K=K+1

```

```

0167      40 CONTINUE
0168 C      CAT 5: OVERBURDEN
0169      K=1
0170      KKAT = 5
0171      DO 50 J=1,NOVR
0172      WRITE(LU,1030)
0173      DO 50 L=1,10VR(J)
0174      WRITE (LU,1000) KKAT,IALPH(J),L, (OVRBDN(K,I),I=1,6)
0175      K=K+1
0176      50 CONTINUE
0177 C      CATAGORY 6 : SURFACE HYDROLOGY
0178      K=1
0179      KKAT = 6
0180      DO 60 J=1,NSUR
0181      WRITE(LU,1030)
0182      DO 60 L=1,1SUR(J)
0183      WRITE (LU,1000) KKAT,IALPH(J),L, (SURHYD(K,I),I=1,6)
0184      K=K+1
0185      60 CONTINUE
0186 C      CAT 7 G.W. HYDROLOGY
0187      K=1
0188      KKAT = 7
0189      DO 70 J=1,NGRW
0190      WRITE(LU,1030)
0191      DO 70 L=1,1GRW(J)
0192      WRITE (LU,1000) KKAT,IALPH(J),L, (GRWHYD(K,I),I=1,6)
0193      K=K+1
0194      70 CONTINUE
0195 C      CAT 8 VEGETATION
0196      K=1
0197      KKAT = 8
0198      DO 80 J=1,NVEG
0199      WRITE(LU,1030)
0200      DO 80 L=1,1VEG(J)
0201      WRITE (LU,1000) KKAT,IALPH(J),L, (VEGETA(K,I), I=1,6)
0202      K=K+1
0203      80 CONTINUE
0204 C      CAT 9 WILDLIFE
0205      K=1
0206      KKAT = 9
0207      DO 90 J=1,NANM
0208      WRITE(LU,1030)
0209      DO 90 L=1,1ANM(J)
0210      WRITE (LU,1000) KKAT,IALPH(J),L, (ANIMAL(K,I),I=1,6)
0211      K=K+1
0212      90 CONTINUE
0213 C      CAT 10 SOCIO-ECONOMIC FACTORS
0214      K=1
0215      KKAT = 10
0216      DO 100 J=1,NSOC
0217      WRITE(LU,1030)
0218      DO 100 L=1,1SOC(J)
0219      WRITE (LU,1000) KKAT,IALPH(J),L, (SOCECN(K,I),I=1,6)
0220      K=K+1
0221      100 CONTINUE
0222 C      QUIT OTSPL

```

```
0223 C
0224 . CALL OTSFL (LU, 2)
0225 C
0226 END
0227 END$
```



2DLDCS T=00004 IS ON CR00015 USING 00043 BLKS R=0366

```
0001 FTN4
0002 SUBROUTINE DLDCS
0003 C --- DRAGLINE : DISPLAY CURRENT SLOPES AND PERCENTS ---
0004 C
0005 C LEVEL 3
0006 C
0007 C DLDCS IS ACCESSED BY DLGE TO DISPLAY THE CURRENT SLOPE/PERCENT
0008 C PAIRS FOR THE DRAGLINE MINE, AND TO ALLOW USER MODIFICATION
0009 C OR REDEFINITION OF THEM.
0010 C
0011 C THE CALLING SEQUENCE IS : CALL DLDCS
0012 C
0013 C SUBROUTINES SCHEDULED BY DLDCS ARE:
0014 C
0015 C FIXSP TO FIX THE SLOPE/PERCENT PAIRS
0016 C FIXLN TO FIX THE LINE OF OUTPUT
0017 C DLISP TO INPUT USER DEFINED SLOPE/PERCENT PAIRS
0018 C
0019 C DLDCS USES THE TCS ROUTINES : BELL, ERASE, HOME, AND TINPT
0020 C
0021 C THE LOCAL VARIABLES ARE:
0022 C
0023 C IANS -> ANSWER CELL
0024 C KPASS -> POINTER
0025 C NUMB -> NUMBER OF SLOPE/PERCENT PAIRS FOR CURRENT LUO
0026 C SLOP -> SLOPE ARRAY FOR CURRENT LUO
0027 C PRCT -> PERCENT ARRAY FOR CURRENT LUO
0028 C LINE -> OUTPUT LINE
0029 C KPAIR -> CURRENT SLOPE/PERCENT PAIR
0030 C
0031 C THIS ROUTINE WAS WRITTEN BY GREEN
0032 C
0033 C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0034 C =====
0035 C
0036 C TEKTRONIX COMMON
0037 C
0038 COMMON ITEK (45)
0039 C
0040 C LOGICAL UNITS AND COMMON LOCATION
0041 C
0042 COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0043 C
0044 C POINTERS
0045 C
0046 COMMON EXIT ,IANM(3),ICL1(2),IGEN(3),IGRW(5)
0047 COMMON IOPTN ,IOVR(7),IPNTR ,ISOC(6),ISUB(8)
0048 COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT ,LUO
0049 COMMON MODE ,NANM ,NCLI ,NGEN ,NGRW
0050 COMMON NOVR ,NSECTS ,NSOC ,NSUB ,NSUR
0051 COMMON NTOP ,NU ,NVEG
0052 C
0053 C GRADING PARAMETERS
0054 C
```

```

0055      COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCFA(5)
0056      COMMON GROVBS(5),HWHT(5,10),HWSLI(5,10),NSPF(5),PCEQ19(4)
0057      COMMON PERCNT(5,10),REHCPY(5),REHVOL(5),SLOPE(5,10),WBF
0058      C
0059      C      CATEGORY TEXT
0060      C
0061      COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0062      COMMON OVRD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0063      COMMON TPSL(49,13),VGTA(15,13)
0064      C
0065      C      EXPECTATION VALUES
0066      C
0067      COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0068      COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0069      COMMON TOPSOI(33,6),VEGETA(10,6)
0070      C
0071      C      CATEGORY RESPONSES
0072      C
0073      COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0074      COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0075      COMMON RTOPSO(9),RVEGET(2)
0076      C
0077      C      FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0078      C
0079      COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHM
0080      COMMON CABS(2),CAC,CACP,CADF,CADH
0081      COMMON CADS,CAEAF,CAHSAP,CAHSTS,CAIP
0082      COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0083      COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0084      COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0085      C
0086      INTEGER EXIT,CLMA,GDES,GWHY,OVRD,SBSL
0087      INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0088      INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0089      INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0090      INTEGER VEGETA,ANIMAL
0091      INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0092      INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0093      INTEGER RCLTEC,TTL
0094      C
0095      INTEGER COMMON (1)
0096      EQUIVALENCE (COMMON (1), ITEK (1))
0097      EQUIVALENCE (IARY (1), LUT)
0098      EQUIVALENCE (IARY2 (1), ISTRK)
0099      EQUIVALENCE (IARY2 (2), ISECT)
0100      EQUIVALENCE (IARY2 (3), ICODE)
0101      EQUIVALENCE (IARY2 (4), LEN)
0102      C
0103      LOGICAL LER
0104      C
0105      INTEGER LINE(74)
0106      INTEGER ALTN (6,4)
0107      COMMON /ALTRN/ ALTN
0108      DIMENSION PRCT(10),SLPE(10)
0109      C
0110      KPASS=0

```



```

0111      1 CALL FIXSF
0112 C      DISPLAY THE CURRENT SLOPES AND PERCENTS
0113      LUL = LUT
0114      2 IF ( .NOT. LER ) GOTO 5
0115      CALL ERASE
0116      CALL HOME
0117      5 IF(LUL.EQ.6) WRITE(LUL,999)
0118      WRITE (LUL,1000) ((ALTN(K,J),J=1,4),K=1,5)
0119      KPAIR=1
0120      6 CALL FIXLN(SLOPE,PERCNT,NSPF,KPAIR,LINE)
0121      WRITE(LUL,1010) LINE
0122      DO 7 I=1,5
0123          IF(NSPF(I).LE.KPAIR) GOTO 7
0124          KPAIR=KPAIR+1
0125          GOTO 6
0126      7 CONTINUE
0127      WRITE(LUL,1020)
0128 C      CHECK POINTER. IF NON-ZERO , WE'RE DONE
0129      IF (KPASS .EQ. 0) GOTO 25
0130      IF (LUL .EQ. 6 .OR. .NOT. LER) RETURN
0131      CALL BELL
0132      CALL TINPT (IANS)
0133      CALL ERASE
0134      RETURN
0135 C      USER INPUT -> USE OR MODIFY THE SLOPE/PERCENT PAIRS
0136      25 WRITE(LUT,1040)
0137      READ(LUT,*) IANS
0138      IF ( LER) CALL ERASE
0139      IF ( LER) CALL HOME
0140      IF(IANS .GE. 1 .AND. IANS .LE. 3) GOTO(300,200,100) IANS
0141      WRITE (LUT,1050)
0142      GOTO 25
0143 C      INPUT A NEW SET OF SLOPES AND PERCENTS
0144      100 ISTART = 1
0145      IQUIT = 5
0146      IF(RGENDE(2).NE.2) ISTART = 2
0147      IF(RGENDE(2).EQ.2.AND.NSPF(1).EQ.0) ISTART=2
0148      IF (RGENDE (2) .NE. 2) IQUIT = 4
0149      DO 110 LUO = ISTART, IQUIT
0150          CALL DLISF (PRCT,SLPE,NUMB)
0151          NSPF(LUO) = NUMB
0152          DO 105 J = 1 ,NSPF (LUO)
0153              SLOPE(LUO,J) = SLPE(J)
0154      105      PERCNT(LUO,J) = PRCT(J)
0155      110      CONTINUE
0156      GOTO 290
0157 C      WHICH LAND USE OPTION NEEDS MODIFICATION ?
0158      200 WRITE(LUT,1060)
0159      IF(RGENDE(2).EQ.2.AND.NSPF(1).GT.0) WRITE(LUT,1061)
0160      IF(RGENDE(2).NE.2) WRITE(LUT,1062)
0161      IF(RGENDE(2).EQ.2.AND.NSPF(1).EQ.0) WRITE(LUT,1063)
0162      READ(LUT,*) LUO
0163      IF (LUO .EQ. 0) GOTO 290
0164      IF (RGENDE (2) .EQ. 2) 201, 202
0165      201 LIMIT=5
0166          IF(NSPF(1).EQ.0) LIMIT=4

```



```

0167         IF(LUO.LT.1.OR.LUO.GT.LIMIT) GOTO 205
0168         IF(NSPP(1).EQ.0) 203, 210
0169 202     IF (LUO .GE. 1 .AND. LUO .LE. 3) 203, 205
0170 203     LUO = LUO + 1
0171         GOTO 210
0172 205     WRITE(LUT,1050)
0173         GOTO 200
0174 210     CALL DLISF (PRCT,SLPE,NUMB)
0175         NSPP(LUO) = NUMB
0176         DO 215 J = 1 ,NSPP (LUO)
0177         SLOPE(LUO,J) = SLPE(J)
0178 215     PERCNT(LUO,J) = PRCT(J)
0179 C         USER INPUT -> ANOTHER MODIFICATION ?
0180         WRITE(LUT,1070)
0181         READ(LUT,1080) IANS
0182         IF(IANS .NE. 2HYE) GOTO 290
0183         IF ( LER) CALL ERASE
0184         IF ( LER) CALL HOME
0185         GOTO 200
0186 C         SLOPES AND PERCENTS ARE CURRENT.
0187 C         DOES THE USER WANT TO VIEW THEM ?
0188 290     WRITE(LUT,1090)
0189         READ(LUT,1080) IANS
0190         IF(IANS .NE. 2HYE) RETURN
0191         WRITE (LUT,2000)
0192         READ (LUT,1080) IANS
0193         IF (IANS.EQ.2HLP) LUL = 6
0194         IF (IANS.EQ.2HLP) KPASS = 1
0195         GOTO 2
0196 C         DOES THE USER WANT A LINE PRINTER COPY ?
0197 300     WRITE (LUT,2010)
0198         READ (LUT,1080) IANS
0199         IF ( LER) CALL ERASE
0200         IF ( LER) CALL HOME
0201         IF (IANS.NE.2HYE) RETURN
0202         LUL = 6
0203         WRITE (LUL,2020)
0204         KPASS = 1
0205         GOTO 5
0206 C         FORMAT STATEMENTS
0207 999     FORMAT(1H1)
0208 1000    FORMAT(/24X"CURRENT SLOPE-PERCENT PAIRS"/
0209         >      24X"=====)//
0210         > 5(3X,4A2,4X)/
0211         > 5(1X"SLOPE-PERCENT"1X)/
0212         > 5(1X"-----"1X)/)
0213 1010    FORMAT(74A1)
0214 C
0215 1020    FORMAT(74(="))
0216 C
0217 1040    FORMAT(1X"SELECT: 1=>PROCEED,2=>MODIFY SOME SLOPES"
0218         >      ",3=>RE-DEFINE ALL SLOPES -> _")
0219 C
0220 1050    FORMAT (/ ,5X"ERROR -> ILLEGAL INPUT. RE-SELECT"/)
0221 C
0222 1060    FORMAT (// ,5X"WHICH ALTERNATIVE DO YOU WANT TO MODIFY ?"//,

```

```

0223      &7X'0) NONE')
0224 1061 FORMAT(
0225      &7X'1) CROPLAND'/',
0226      &7X'2) NATIVE VEGETATION'/',
0227      &7X'3) WILDLIFE'/',
0228      &7X'4) WATER RECREATION'/',
0229      &7X'5) HIGH USE'//,
0230      &7X'ENTER THE APPROPRIATE NUMBER HERE -> _')
0231 C
0232 1062 FORMAT(
0233      &7X'1) NATIVE VEGETATION'/',
0234      &7X'2) WILDLIFE'/',
0235      &7X'3) WATER RECREATION'//,
0236      &7X'ENTER THE APPROPRIATE NUMBER HERE -> _')
0237 C
0238 1063 FORMAT(
0239      > 7X'1) NATIVE VEGETATION'/',
0240      > 7X'2) WILDLIFE'/',
0241      > 7X'3) WATER RECREATION'/',
0242      > 7X'4) HIGH USE'//,
0243      > 7X'ENTER YOUR SELECTION HERE -> _')
0244 C
0245 1070 FORMAT (/ ,5X'DO YOU HAVE ANOTHER MODIFICATION ?'/',
0246      &5X' (YES OR NO) -> _')
0247 C
0248 1080 FORMAT (A2)
0249 C
0250 1090 FORMAT (/ ,5X'WOULD YOU LIKE TO VIEW THE TABLE AGAIN ?'/',
0251      &5X' (YES OR NO) -> _')
0252 C
0253 2000 FORMAT (/ ,5X'WOULD YOU LIKE THE TABLE DISPLAYED ON'/',
0254      &7X'THE TERMINAL, OR THE LINE PRINTER ? (TT OR LP)->_')
0255 C
0256 2010 FORMAT (5X'WOULD YOU LIKE A LINE PRINTER COPY OF'/',
0257      &5X'THE CURRENT SLOPE VALUES ? (YES OR NO) ->_')
0258 C
0259 2020 FORMAT (1H1)
0260 C
0261      END
0262 ENDD$

```



8DLFCA T=00004 IS ON CR00015 USING 00013 BLKS R=0062

```
0001  FTN4
0002      SUBROUTINE DLFCA(PL,BC,GA,CD,ANACB,ANFDE,
0003      >      ANAGI,ANGHTI,GH,JK,JL,KERR)
0004  C      ---DRAGLINE FINAL CUT : CORRECT AREA---
0005  C
0006  C  LEVEL 6
0007  C
0008  C  DLFCA IS ACCESSED BY DLGCF TO CORRECT THE CROSS-SECTIONAL AREA
0009  C  COMPUTED BY DLFIA.
0010  C
0011  C  THE CALLING SEQUENCE IS :
0012  C    CALL DLFCA(PL,BC,GA,CD,ANFDE,ANAGI,ARJDL,GH,JK,JL,GK,KERR)
0013  C  WHERE:
0014  C  'PL' IS THE WIDTH (FEET) OF THE FINAL HIGHWALL (PHASE 1)
0015  C      OR THE SPOIL BANK (PHASE 2)
0016  C  'BC' IS THE WIDTH (FEET) OF THE INITIAL HIGHWALL (PHASE 1)
0017  C      OR THE SPOIL BANK (PHASE 2)
0018  C  'GA' IS THE WIDTH (FEET) OF THE HIGHWALL (PHASE 1) OR
0019  C      THE SPOIL BANK (PHASE 2)
0020  C  'CD' IS THE WIDTH (FEET) AT THE BOTTOM OF THE PIT. THIS IS
0021  C      THE CURRENT WIDTH, AND MAY DIFFER FROM THE INITIAL
0022  C      WIDTH DEFINED BY THE USER IN DLFID.
0023  C  'ANACB' IS THE INITIAL SLOPE (DEGREES) OF THE HIGHWALL (PHASE 1)
0024  C      OR THE SPOIL BANK (PHASE 2)
0025  C  'ANFDE' IS THE INITIAL SLOPE (DEGREES) OF THE SPOIL BANK (PHASE 1)
0026  C      OR THE FINAL SLOPE OF THE HIGHWALL (PHASE 2)
0027  C  'ANAGI' IS THE FINAL SLOPE
0028  C  'ARGHTI' IS THE (RETURNED) AREA (SQUARE FEET) CORRECTION
0029  C  'GH' IS THE (RETURNED) CORRECTION (FEET) OF THE HIGHWALL (PHASE 1)
0030  C      OR THE SPOIL BANK (PHASE 2)
0031  C  'JK' IS THE (RETURNED) CORRECTION (FEET) ON THE SPOIL BANK
0032  C      SLOPE (PHASE 1) OR THE HIGHWALL SLOPE FACE (PHASE 2)
0033  C  'JL' IS THE (RETURNED) CORRECTION (FEET) TO THE FACE OF THE
0034  C      HIGHWALL BANK (PHASE 1) OR THE SPOIL BANK FACE (PHASE 2)
0035  C  'KERR' IS THE ERROR RETURN CELL: 0=> NO ERRORS, -1=> ERROR
0036  C
0037  C  LOCAL VARIABLES CORRESPOND TO THE DIAGRAMS IN THE CLAIM
0038  C  PROGRAMMER'S MANUAL
0039  C
0040  C  THIS ROUTINE WAS WRITTEN BY GREEN
0041  C
0042  C  ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0043  C
0044      CDTR = 0.01745
0045      KERR = 0
0046  C      FIND AREA OF JDL
0047      DL = PL - GA - BC - CD
0048      ANIJL = 180. - ANFDE - ANAGI
0049      JL = DL * SIN (ANFDE * CDTR) / SIN (ANIJL * CDTR)
0050      ARJDL = (0.5) * (JL) * (DL) * SIN (ANAGI * CDTR)
0051  C      NOW FIND THE DISCRIMINANT
0052      GL = PL / COS (ANAGI * CDTR)
0053      GJ = GL - JL
0054      ANHKJ = ANFDE - ANAGI
```



```

0055      DENOM = 1/TAN(ANHKKJ*CDTR) - 1/TAN(ANAGI*CDTR)
0056      D = (GJ ** 2) + 2. * ARJDL * DENOM
0057      IF (D .GE. 0.) GOTO 10
0058 C      COMPLEX CONJUGATE ROOTS
0059      KERR = -1
0060      RETURN
0061 C      REAL ROOTS. DETERMINE RESULTS
0062      10 SQRTD = SQRT (D)
0063      H = (SQRTD - GJ) / DENOM
0064 C      WE WANT THE ROOT THAT MAKES
0065 C      PHYSICAL SENSE (GJ-C > 0) .
0066      C = H / TAN (ANAGI * CDTR)
0067      IF (GJ - C) 15, 20, 20
0068      15 H = (-1. * SQRTD - GJ) / DENOM
0069      20 GH = H / SIN (ANAGI * CDTR)
0070      JK = H / SIN (ANHKKJ * CDTR)
0071 C      FIND AREA CORRECTION AND RETURN
0072      ANGAI = 180. - ANACE
0073      ANAIG = 180. - ANAGI - ANGAI
0074      HT = (GA - GH) * (SIN (ANGAI * CDTR)) / (SIN (ANAIG * CDTR))
0075      ARGHTI = (.5 * H ** 2) * (1 / TAN (ANAGI * CDTR)
0076      >      + 1 / TAN (ANAIG * CDTR)) + (HT * H)
0077      RETURN
0078      END
0079      END$

```

```

0001  FTN4
0002      SUBROUTINE DLFIA(AB,ANAGI,ANACB,PL,BC,GA,ARAGI)
0003  C    ---DRAGLINE FINAL CUT: INITIAL AREA DETERMINATION---
0004  C
0005  C LEVEL 6
0006  C
0007  C DLFIA IS ACCESSED BY DLGCF TO COMPUTE THE INITIAL CROSS-SECTIONAL
0008  C AREA BOUNDED BY THE TRIANGLE "AGI" IN THE DIAGRAMS PRESENTED IN THE
0009  C CLAIM PROGRAMMER'S MANUAL. THE METHOD IS TO FIND THE LENGTH OF
0010  C TWO SIDES OF THE TRIANGLE AND EMPLOY THE FORMULA:
0011  C      AREA = (1/2)(A)(B)SIN(THETA)
0012  C
0013  C THE CALLING SEQUENCE IS :
0014  C      CALL DLFIA(AB,ANAGI,ANACB,PL,BC,GA,ARAGI)
0015  C WHERE:
0016  C "AB" IS THE VERTICAL HEIGHT (FEET) OF THE HIGHWALL (PHASE 1)
0017  C      OR THE SPOIL BANK (PHASE 2)
0018  C "ANAGI" IS THE FINAL SLOPE (DEGREES) OF THE HIGHWALL & SPOIL BANK
0019  C "ANACB" IS THE INITIAL SLOPE (DEGREES) OF THE HIGHWALL (PHASE 1)
0020  C      OR THE SPOIL BANK (PHASE 2)
0021  C "PL" IS THE (RETURNED) WIDTH (FEET) OF THE FINAL HIGHWALL (PHASE 1)
0022  C      OR THE SPOIL BANK (PHASE 2)
0023  C "BC" IS THE (RETURNED) WIDTH (FEET) OF THE INITIAL HIGHWALL (PHASE 1)
0024  C      OR THE SPOIL BANK (PHASE 2)
0025  C "GA" IS THE (RETURNED) WIDTH (FEET) OF THE HIGHWALL (PHASE 1)
0026  C      OR THE SPOIL BANK (PHASE 2) REMOVED BY GRADING (AT THE "TOP")
0027  C "ARAGI" IS THE AREA (SQUARE FEET) GRADED
0028  C
0029  C LOCAL VARIABLES CORRESPOND TO THE DIAGRAMS IN THE CLAIM
0030  C PROGRAMMER'S MANUAL.
0031  C
0032  C THIS ROUTINE WAS WRITTEN BY GREEN
0033  C
0034  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0035  C
0036      CDTR = 0.01745
0037  C      IN ORDER TO FIND "GA", WE
0038  C      MUST FIND "PL" AND "BC"
0039      PL = AB / TAN (ANAGI * CDTR)
0040      BC = AB / TAN (ANACB * CDTR)
0041      GA = (0.5) * (PL - BC)
0042  C      NOW FIND "GI" BY USING THE
0043  C      LAW OF SINES WITH THE ANGLES
0044  C      "ANGAI" AND "ANAIG"
0045      ANGAI = 180 - ANACB
0046      ANAIG = 180 - ANAGI - ANGAI
0047      GI = GA * SIN (ANGAI * CDTR) / SIN (ANAIG * CDTR)
0048  C      COMPUTE THE AREA AND QUIT
0049      ARAGI = (0.5) * (GA) * (GI) * SIN (ANAGI * CDTR)
0050      RETURN
0051      END
0052  END$

```



&DLFID Y=00004 IS ON CR00015 USING 00029 BLKS R=0000

```
0001  FTN4
0002                      SUBROUTINE DLFID
0003  C      --- DRAGLINE : FINAL CUT INITIAL DATA ---
0004  C
0005  C LEVEL 2
0006  C
0007  C DLFID IS ACCESSED BY GDE TO SCHEDULE INPUTS AND EDITS TO
0008  C THE INITIAL DATA FOR THE DRAGLINE/FINAL CUT OPTION
0009  C
0010  C "IOPTN" IS A SWITCH WHERE :
0011  C 1 - INPUT MODE
0012  C 2 - EDIT MODE
0013  C 3 - TEMPORARY EDIT MODE
0014  C
0015  C THE CALLING SEQUENCE IS :          CALL DLFID
0016  C
0017  C DLFID USES THE TCS ROUTINES : ERASE AND HOME
0018  C
0019  C "IANS" IS THE LOCAL ANSWER CELL
0020  C "SLMIN" IS THE CURRENT MINIMUM SLOPE VALUE
0021  C
0022  C THIS ROUTINE WAS WRITTEN BY GREEN, BUT PATTERNED AFTER
0023  C A ROUTINE WRITTEN BY EASTMAN. (GRADE)
0024  C
0025  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0026  C =====
0027  C
0028  C      TEKTRONIX COMMON
0029  C
0030  C      COMMON ITEK (45)
0031  C
0032  C      LOGICAL UNITS AND COMMON LOCATION
0033  C
0034  C      COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0035  C
0036  C      POINTERS
0037  C
0038  C      COMMON EXIT      ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0039  C      COMMON IOPTN    ,IOVR(7),IFNTR  ,ISOC(6),ISUB(8)
0040  C      COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT  ,LUO
0041  C      COMMON MODE     ,NANM      ,NCLI      ,NGEN      ,NGRW
0042  C      COMMON NOVR     ,NSECTS   ,NSOC      ,NSUB      ,NSUR
0043  C      COMMON NTOP     ,NU       ,NVEG
0044  C
0045  C      GRADING PARAMETERS
0046  C
0047  C      COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCPA(5)
0048  C      COMMON GROUWS(5),HWHT(5,10),HWSLI(5,10),NSPP(5),PCEQ19(4)
0049  C      COMMON PERCNT(5,10),REHCPY(5),REHVOL(5),SLOPE(5,10),WBP
0050  C
0051  C      CATEGORY TEXT
0052  C
0053  C      COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0054  C      COMMON OVBD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
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0055      COMMON TPSL(49,13),VGTA(15,13)
0056  C
0057  C      EXPECTATION VALUES
0058  C
0059      COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0060      COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0061      COMMON TOPSOI(33,6),VEGETA(10,6)
0062  C
0063  C      CATEGORY RESPONSES
0064  C
0065      COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0066      COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0067      COMMON RTOPSO(9),RVEGET(2)
0068  C
0069  C      FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0070  C
0071      COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHM
0072      COMMON CABS(2),CAC,CACP,CADF,CADH
0073      COMMON CADS,CAEAF,CAHSAP,CAHSTS,CAIP
0074      COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0075      COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0076      COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0077  C
0078      INTEGER EXIT,CLMA,GDES,GWHY,OVRBD,SBSL
0079      INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0080      INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0081      INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0082      INTEGER VEGETA,ANIMAL
0083      INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0084      INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0085      INTEGER RCLTEC,TTL
0086  C
0087      INTEGER COMMON (1)
0088      EQUIVALENCE (COMMON (1), ITEK (1))
0089      EQUIVALENCE (IARRY (1), LUT)
0090      EQUIVALENCE (IARY2 (1), ISTRK)
0091      EQUIVALENCE (IARY2 (2), ISECT)
0092      EQUIVALENCE (IARY2 (3), ICODE)
0093      EQUIVALENCE (IARY2 (4), LEN)
0094  C
0095      LOGICAL LER
0096  C
0097      SLMIN = 11.
0098      IF(MODE.EQ.4) SLMIN = 0.1
0099  C      DISPLAY THE TITLE
0100  1      IF (LER) CALL ERASE
0101      IF (LER) CALL HOME
0102      EXIT=1
0103      WRITE(LUT, 1000)
0104  C      DISPLAY CURRENT DATA FOR EDIT MODE (IOPTN = 2)
0105      IF (IOPTN.EQ.1) GOTO 20
0106      WRITE (LUT, 1100) WBP, GROVBS, COGO
0107  2 READ (LUT, *) IANS
0108      IF (IANS.EQ.0) GOTO 4
0109      IF (IANS.GE.1.AND.IANS.LE.7)
0110      >GOTO ( 20, 30, 40, 50, 60, 70, 80 ) IANS

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```

0111      WRITE (LUT, 1110)
0112      GOTO 2
0113      4      IF(IOPTN.EQ.3) IOPTN=1
0114      RETURN
0115  C      USER INPUT -> WIDTH OF BOTTOM OF PIT
0116      20 WRITE (LUT, 1010)
0117      READ (LUT, *) WBF
0118      IF (IOPTN.NE.1) GOTO 1
0119      IF (WBF.GE.0.) GOTO 30
0120      EXIT = 0
0121      RETURN
0122  C      USER INPUT -> LENGTH OF THE PIT
0123      30 WRITE (LUT, 1030)
0124      32 READ (LUT, *) GRDVS (1)
0125      IF (GRDVS(1).GT.0.) GOTO 33
0126      WRITE(LUT,1085)
0127      GOTO 32
0128      33 IF (IOPTN.NE.1) GOTO 1
0129  C      USER INPUT -> HEIGHT OF THE HIGHWALL
0130      40 WRITE (LUT, 1040)
0131      42 READ (LUT, *) GRDVS (2)
0132      IF (GRDVS(2).GT.0.) GOTO 43
0133      WRITE(LUT,1085)
0134      GOTO 42
0135      43 IF (IOPTN.NE.1) GOTO 1
0136  C      USER INPUT -> HEIGHT OF SPOIL BANK
0137      50 WRITE (LUT, 1050)
0138      52 READ (LUT, *) GRDVS (3)
0139      IF (GRDVS(3).GT.0.) GOTO 53
0140      WRITE(LUT,1085)
0141      GOTO 52
0142      53 IF (IOPTN.NE.1) GOTO 1
0143  C      USER INPUT -> SLOPE OF HIGHWALL
0144      60 WRITE (LUT, 1060)
0145      READ (LUT, *) GRDVS (4)
0146      IF (GRDVS (4).GE.SLMIN.AND.GRDVS (4).LT.90.)
0147      >GOTO ( 70,1,1 ) IOPTN
0148      WRITE (LUT, 1065) SLMIN
0149      GOTO 60
0150  C      USER INPUT -> SLOPE OF THE SPOIL
0151      70 WRITE (LUT, 1070)
0152      READ (LUT, *) GRDVS (5)
0153      IF (GRDVS (5).GE.SLMIN.AND.GRDVS (5).LT.90.)
0154      >GOTO ( 80,1,1 ) IOPTN
0155      WRITE (LUT, 1065) SLMIN
0156      GOTO 70
0157  C      USER INPUT -> COST OF GRADING SPOILS
0158      80 WRITE (LUT, 1080)
0159      82 READ (LUT, *) COGO
0160      IF (COGO.GT.0.) GOTO 83
0161      WRITE(LUT,1085)
0162      GOTO 82
0163      83 IF (IOPTN.NE.1) GOTO 1
0164      IOPTN=3
0165      GOTO 1
0166  C      FORMAT STATEMENTS

```



```

0167 1000 FORMAT(// "--- DRAGLINE/FINAL CUT ---" //)
0168 C
0169 1100 FORMAT(/, 5X "CURRENT VALUES FOR THE DATA ARE :",
0170      &7X "1) WIDTH OF THE BOTTOM OF THE PIT      :", "F13.2" FEET"/,
0171      &7X "2) TOTAL LENGTH OF THE PIT              :", "F13.2" YARDS"/,
0172      &7X "3) VERTICAL HEIGHT OF THE HIGHWALL      :", "F13.2" FEET"/,
0173      &7X "4) VERTICAL HEIGHT OF THE SPOIL BANK    :", "F13.2" FEET"/,
0174      &7X "5) INITIAL AVERAGE SLOPE OF THE "/,
0175      &7X "    HIGHWALL                            :", "F13.2" DEGREES"/,
0176      >7X "6) INITIAL AVERAGE SLOPE OF THE"/,
0177      >7X "    SPOIL BANK                          :", "F13.2" DEGREES"/,
0178      &7X "7) COST OF GRADING SPOILS              :", "F13.2" CENTS/CU.YD" ///,
0179      &1X " IF YOU WISH TO CHANGE ANY OF THE ABOVE VALUES, ENTER"/,
0180      &2X "THE NUMBER CORRESPONDING TO THE ITEM YOU WISH TO CHANGE."/,
0181      &2X "IF NO CHANGES ARE DESIRED, ENTER A ZERO -> _")
0182 C
0183 1110 FORMAT(/, 5X "ERROR--> ILLEGAL CHOICE, RE-SELECT, -> _")
0184 C
0185 1010 FORMAT(/ "WIDTH OF BOTTOM OF THE PIT (FEET) -> _")
0186 C
0187 1030 FORMAT(/ "TOTAL LENGTH OF THE PIT (YARDS) -> _")
0188 C
0189 1040 FORMAT(/ "VERTICAL HEIGHT OF THE HIGHWALL (FEET) -> _")
0190 C
0191 1050 FORMAT(/ "VERTICAL HEIGHT OF THE SPOIL BANK (FEET) -> _")
0192 C
0193 1060 FORMAT(/ "AVERAGE INITIAL SLOPE OF THE HIGHWALL (DEG) -> _")
0194 C
0195 1065 FORMAT(/ 2X "ERROR -> SLOPE MUST BE BETWEEN "F5.2" DEGREES"/
0196      >      2X "      AND 90 DEGREES."/)
0197 C
0198 1070 FORMAT(/ "AVERAGE INITIAL SLOPE OF THE SPOIL BANK (DEG) -> _")
0199 C
0200 1080 FORMAT(/ "COST OF GRADING SPOILS (CENTS/CU.YD) -> _")
0201 C
0202 1085 FORMAT(/, 1X "ERROR-> VALUE MUST BE GREATER THAN ZERO -> _")
0203     END
0204 END$

```



&DLGCM T=00004 IS ON CR00015 USING 00019 BLKS R=0181

```
0001  FTN4
0002      SUBROUTINE DLGCM (SLOP,PCT,VOL,COST,TLSE,GRDVB,COG)
0003  C --- DRAGLINE GRADING COMPUTATIONS : MINE RUN ---
0004  C
0005  C LEVEL 5
0006  C
0007  C DLGCM IS ACCESSED BY DLGE,BUILD,AND DLST AND BUILD TO DETERMINE
0008  C VOLUMES, COSTS, AND COSTS PER ACRE FOR THE MINE RUN
0009  C OPTION.
0010  C
0011  C THE VARIABLE 'KODE' DIRECTS DLGCM TO PLACE THE RESULTS
0012  C IN TABLES (KODE=2), OR DIRECTLY TO VOL AND COST ARRAYS
0013  C (KODE=1)
0014  C
0015  C THE CALLING SEQUENCE IS :
0016  C
0017  C      CALL DLGCM(SLOP,PCT,VOL,COST,TLSE,GRDVB,COG)
0018  C
0019  C WHERE:
0020  C
0021  C      SLOP IS THE FINAL SLOPE (DEGREES) DESIRED ON THE SPOIL BANKS
0022  C      PCT IS THE PERCENT OF THE AREA TO BE COVERED BY SLOP
0023  C      VOL IS THE VOLUME (CUBIC YARDS) GRADED
0024  C      COST IS THE COST (DOLLARS) TO GRADE SPOILS
0025  C      TLSE IS THE HYPOTHETICAL TOTAL LENGTH (FEET) OF A SPOIL BANK
0026  C              COVERING THE SAME ACREAGE AS THE MINE RUN SPOILS
0027  C      GRDVB IS THE GRADING VARIABLES ARRAY:
0028  C          GRDVB (1) -> DISTANCE (FEET) BETWEEN SPOIL BANK PEAKS
0029  C          GRDVB (2) -> SLOPE (DEGREES) OF THE SPOIL BANKS
0030  C          GRDVB (3) -> AREA (ACRES) COVERED BY THE SPOILS
0031  C          GRDVB (4) -> GENERAL SLOPE (DEGREES) OF THE AREA
0032  C                      PERPENDICULAR TO THE SPOILS
0033  C      COG -> COST (CENTS/CUBIC YARD) OF GRADING OVERBURDEN
0034  C
0035  C LOCAL VARIABLES CORRESPOND TO THE DIAGRAMS IN THE
0036  C CLAIM PROGRAMMER'S MANUAL
0037  C
0038  C DLGCM DECLARES LABEL COMMON TABLE
0039  C
0040  C THIS ROUTINE WAS WRITTEN BY EASTMAN/GREEN
0041  C
0042  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0043  C
0044  C      COMMON /TABLE/
0045  C          >          TBLV, TBLT, TBLA, TELS, JCOUNT,TSMIN,KODE,
0046  C          >          TSMAX,TVMIN,TVMAX,TAMIN,TAMAX,TTMIN,TTMAX
0047  C
0048  C      DIMENSION TBLV(12),TBLT(12),TBLA(12),TELS(12)
0049  C      DIMENSION GRDVB(5)
0050  C
0051  C          CONVERT GRDVB TO VARIABLES CORRESPONDING TO
0052  C          THE DIAGRAMS IN THE PROGRAMMER'S MANUAL
0053  C      DBSBF = GRDVB(1)
0054  C      SLOPI = GRDVB(2)
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0055      TASA = GROVBS(3)
0056      AGH = GROVBS(4)
0057 C          CONVERT TASA TO SQUARE YARDS
0058      TASY = TASA * 4840.
0059 C          CALCULATE A HYPOTHETICAL LENGTH FOR THE SPOILS
0060      SHEAY = SQRT(TASY)
0061      SHEAF = SHEAY * 3.
0062      BANKS = SHEAF / DBSBF
0063      TLSE = BANKS * SHEAY
0064 C          "CDTR" CONVERTS FROM DEGREES TO RADIANS
0065      CDTR = 0.01745
0066      RAGH = AGH * CDTR
0067 C          CONVERT COG TO DOLLARS
0068      COMO = COG / 100.
0069      RSLOPI = SLOPI * CDTR
0070 C          CALCULATE THE AREA OF THE CROSS-SECTION OF THE PART
0071 C          OF THE SPOIL BANK THAT IS TO BE MOVED.
0072 C          CONVERT THE DISTANCE BETWEEN SPOIL BANK PEAKS FROM
0073 C          FEET TO YARDS.
0074      AG = DBSBF/3.
0075      GI = AG * SIN(RAGH)
0076      AI = AG * COS(RAGH)
0077      IH = GI / TAN(RSLOPI)
0078      GH = GI / SIN(RSLOPI)
0079      AH = AI + IH
0080      AJ = AH / 2.
0081      HJ = AJ
0082 C          NOW FIND THE AREA OF THE LEFT TRIANGLE TO BE MOVED
0083      AD = AJ / COS(RSLOPI)
0084      CD = AD/2.
0085      CDL = 90. - SLOPI
0086      DCL = 90. - SLOP - CDL
0087      DLC = 180. - CDL - DCL
0088 C          CONVERT TO RADIANS FROM DEGREES
0089      RCDL = CDL * CDTR
0090      RDCL = DCL * CDTR
0091      RDLC = DLC * CDTR
0092 C          CALCULATE THE AREA OF THE TRIANGLE
0093      AREAL = ((CD * CD) * SIN(RCDL) * SIN(RDCL)) / (2 * SIN(RDLC))
0094 C          NOW FIND THE AREA OF THE OTHER TRIANGLE TO BE MOVED
0095      DH = HJ / COS(RSLOPI)
0096      DG = DH - GH
0097      DE = DG/2.
0098      EDL = 90. - SLOPI
0099      DLE = 90. + SLOP
0100      DEL = SLOPI - SLOP
0101      REDL = EDL * CDTR
0102      RDLE = DLE * CDTR
0103      RDEL = DEL * CDTR
0104 C          NOW CALCULATE THE AREA OF THE TRIANGLE
0105      AREAR = ((DE * DE) * SIN(REDL) * SIN(RDEL)) / (2 * SIN(RDLE))
0106 C          TOTAL AREA TO BE MOVED = SUM OF AREAS OF LEFT
0107 C          AND RIGHT TRIANGLES
0108      AREA = AREAR + AREAL
0109 C          CALCULATE THE PERCENT OF THE TOTAL LENGTH OF THE
0110 C          SPOIL BANKS

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0111      PLEN = (PCT /100.) * TLSB
0112      C          CALCULATE THE VOLUME
0113      VOL = PLEN * AREA
0114      C          THE VOLUME IS IN CUBIC YARDS
0115      C          ADD TO TOTAL VOLUME
0116      C          CALCULATE THE COST
0117      COST = VOL * COMO
0118      C          NOW COMPUTE THE COST PER ACRE
0119      CPA = COST / TASA
0120      IF(SLOP.NE.SLOPI) GOTO 150
0121      VOL=0.
0122      COST=0.
0123      CPA=0.
0124      150 CONTINUE
0125      IF(KODE.NE.2) RETURN
0126      TBL5(JCOUNT) = SLOP
0127      TBLV(JCOUNT) = VOL
0128      TBLT(JCOUNT) = COST
0129      TBLA(JCOUNT) = CPA
0130      RETURN
0131      END
0132      END$

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&DLGCF T=00004 IS ON CR00015 USING 00017 BLKS R=0102

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0001  FTN4
0002      SUBROUTINE DLGCF(SLOP,PCT,WBF,GRDVBS,COGO,VOL,COST,ACRES)
0003  C      --- DRAGLINE GRADING COMPUTATIONS : FINAL CUT ---
0004  C
0005  C LEVEL 5
0006  C
0007  C DLGCF IS ACCESSED BY DLGE,BUILD, AND DLST TO PERFORM
0008  C GRADING CALCULATIONS FOR THE FINAL CUT STAGE OF A
0009  C DRAGLINE MINE.
0010  C
0011  C DLGCF CONSISTS OF THREE PHASES :
0012  C   1) HIGHWALL GRADING
0013  C   2) SPOIL BANK GRADING
0014  C   3) VOLUME,COST, AND AREA DETERMINATION
0015  C
0016  C DLGCF CALLS SUBROUTINES DLFIA AND DLFCA TO DETERMINE THE
0017  C INITIAL CROSS-SECTIONAL AREA REMOVED BY GRADING AND THE
0018  C CORRECTION TO THAT AREA (IF NEEDED), RESPECTIVELY.
0019  C
0020  C THE CALLING SEQUENCE IS :
0021  C   CALL DLGCF(SLOP,PCT,WBF,GRDVBS,COGO,VOL,COST,ACRES)
0022  C WHERE :
0023  C "SLOP" IS THE FINAL SLOPE DESIRED ON THE HIGHWALL
0024  C      AND THE SPOIL BANK (DEGREES)
0025  C "PCT" IS THE PERCENT OF THE AREA TO BE COVERED BY "SLOP" (%)
0026  C "WBF" IS THE WIDTH AT THE BOTTOM OF THE PIT (FEET)
0027  C "GRDVBS" IS THE GRADING VARIABLES ARRAY AS INITIALIZED IN DLFID
0028  C "COGO" IS THE COST OF GRADING OVERBURDEN (CENTS/CUBIC YARD)
0029  C "VOL" IS THE (RETURNED) VOLUME GRADED (CUBIC YARDS)
0030  C "COST" IS THE (RETURNED) COST FOR GRADING TO "SLOP" (DOLLARS)
0031  C "ACRES" IS THE (RETURNED) FINAL AREA COVERED BY THE SPOILS (ACRES)
0032  C
0033  C LOCAL VARIABLES CORRESPOND TO THE DIAGRAMS IN THE PROGRAMMER'S
0034  C MANUAL.
0035  C
0036  C THIS ROUTINE WAS WRITTEN BY GREEN
0037  C
0038  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0039  C
0040      COMMON /TABLE/
0041      >          TBLV, TBLT, TBLA, TBLs, JCOUNT, TSMIN, KODE,
0042      >          TSMAX, TVMIN, TVMAX, TAMIN, TAMAX, TTMIN, TTMAX
0043  C
0044      DIMENSION TBLV(12),TBLT(12),TBLA(12),TBLs(12)
0045  C
0046      DIMENSION GRDVBS(1)
0047  C          LET'S START BY CONVERTING THE
0048  C          ARGUMENTS TO NOMENCLATURE
0049  C          CORRESPONDING TO THE DIAGRAMS
0050      ANAGI = SLOP
0051      CD = WBF
0052      AB1 = GRDVBS(2)
0053      AB2 = GRDVBS(3)
0054  C          NOTE: '1' AND '2' ARE APPENDED
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0055 C          TO THE VARIABLE NAMES TO
0056 C          DISTINGUISH BETWEEN PHASE 1 & 2
0057          ANACB1 = GRDVBS(4)
0058          ANACB2 = GRDVBS(5)
0059 C          INITIALIZE PARAMETERS
0060          VOL = 0.
0061          COST = 0.
0062          ACRES = 0.
0063          CDTR = 0.01745
0064          ARGHT1 = 0.
0065          ARGHT2 = 0.
0066 C          INITIATE PHASE 1 : HIGHWALL GRADING
0067          CALL DLFIA(AB1,ANAGI,ANACB1,PL1,BC1,GA1,ARAGI1)
0068          IF (GA1 - CD) 110, 110, 150
0069 C          SITUATION ONE : ADJUST CD
0070 110 LD = GA1 + BC1 + CD - PL1
0071          CD = CD - LD
0072          GOTO 200
0073 C          SITUATION TWO : CORRECT AREA
0074 150 CALL DLFCA (PL1,BC1,GA1,CD,ANACB1,ANACB2,
0075 >          ANAGI,ARGHT1,GH1,JK1,JL1,KERR)
0076          IF (KERR .EQ. 0) GOTO 160
0077 C          <ERROR FLAG> ** RETURN
0078 155          ACRES = -1.
0079          RETURN
0080 160 CD = 0.
0081 C          INITIATE PHASE 2: SPOIL BANK GRADING
0082 200          IF (CD .GT. 0.) GOTO 225
0083          DJ = JL1 * SIN(ANAGI*CDTR) / SIN(ANACB2*CDTR)
0084          DK = DJ + JK1
0085          BB = DK * SIN(ANACB2*CDTR)
0086          AB2 = AB2 - BB
0087          GA1 = GA1 - GH1
0088 225 CALL DLFIA(AB2,ANAGI,ANACB2,PL2,BC2,GA2,ARAGI2)
0089          IF (GA2 - CD) 300, 300, 230
0090 C          CORRECT OVERGRADING
0091 230 CALL DLFCA (PL2,BC2,GA2,CD,ANACB2,ANAGI,
0092 >          ANAGI,ARGHT2,GH2,JK2,JL2,KERR)
0093          IF (KERR .NE. 0) GOTO 155
0094          GA2 = GA2 - GH2
0095 C          PHASE 3 : VOLUME, COST, AND AREA
0096 300 IF(ARGHT1 + ARGHT2) 155, 310, 310
0097 310 VOL = ( (ARAGI1 - ARGHT1) + (ARAGI2 - ARGHT2) )
0098 >          * (PCT / 100.) * (GRDVBS(1)) / 9.
0099          COST = VOL * COGO / 100.
0100          ACRES = (GA1 + GA2 + BC1 + BC2 + WBF) * GRDVBS(1) *
0101 >          3./43560. * PCT / 100.
0102 C
0103          IF(KODE.NE.2) RETURN
0104          TBL5(JCOUNT) = SLOP
0105          TBLV(JCOUNT) = VOL
0106          TBLT(JCOUNT) = COST
0107          TBLA(JCOUNT) = COST/ACRES
0108          RETURN
0109          END
0110 END$

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0001  FTN4
0002      SUBROUTINE DLGCO (SLOP,PCT,VOL,COST,CPA,GRDVBS,COG,WIDTH)
0003  C      --- DRAGLINE GRADING COMPUTATIONS : OPENING CUT ---
0004  C
0005  C LEVEL 5
0006  C
0007  C DLGCO IS ACCESSED BY DLGE,BUILD,AND DLST AND BUILD TO DETERMINE
0008  C VOLUMES, COSTS, AND WIDTHS FOR THE OPENING CUT OPTION.
0009  C
0010  C THE VARIABLE "KODE" TELLS DLGCO TO PLACE RESULTS IN
0011  C THE TABLES (KODE=2) OR IN VOL AND COST (KODE=1).
0012  C
0013  C THE CALLING SEQUENCE IS :
0014  C
0015  C      CALL DLGCO(SLOP,PCT,VOL,COST,CPA,GRDVBS,COG,WIDTH)
0016  C
0017  C WHERE:
0018  C
0019  C      SLOP IS THE FINAL SLOPE (DEGREES) DESIRED ON THE SPOIL BANK
0020  C      PCT IS THE PERCENTAGE OF THE AREA TO BE COVERED BY SLOP
0021  C      VOL IS THE (RETURNED) VOLUME (CUBIC YARDS) GRADED
0022  C      CPA IS THE (RETURNED) COST (DOLLARS/ACRE) TO GRADE SPOILS
0023  C      GRDVBS IS THE GRADING VARIABLES ARRAY :
0024  C          GRDVBS (1) -> HEIGHT (FEET) OF THE SPOIL BANK
0025  C          GRDVBS (2) -> SLOPE (DEGREES) OF THE SPOIL BANK
0026  C          GRDVBS (3) -> LENGTH (FEET) OF THE SPOIL BANK
0027  C          GRDVBS (4) -> SLOPE (DEGREES) OF THE AREA
0028  C                      PERPENDICULAR TO THE SPOIL BANK
0029  C          GRDVBS (5) -> NOT USED
0030  C      COG IS COST (CENTS/CUBIC YARD) OF GRADING OVERBURDEN
0031  C      WIDTH IS THE (RETURNED) FINAL WIDTH OF THE SPOIL BANK
0032  C
0033  C THE LOCAL VARIABLES CORRESPOND TO THE DIAGRAMS IN THE
0034  C CLAIM PROGRAMMER'S MANUAL
0035  C
0036  C DLGCO REQUIRES LABEL COMMON TABLE
0037  C
0038  C THIS ROUTINE WAS WRITTEN BY EASTMAN/GREEN
0039  C
0040  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0041  C
0042  C      COMMON /TABLE/
0043  C          >          TBLV, TBLT, TELA, TBLS, JCOUNT,TSMIN,KODE,
0044  C          >          TSMAX,TVMIN,TVMAX,TAMIN,TAMAX,TTMIN,TTMAX
0045  C
0046  C      DIMENSION TBLV(12),TBLT(12),TELA(12),TBLS(12)
0047  C
0048  C      DIMENSION GRDVBS (5)
0049  C
0050  C          RENAME GRDVBS ELEMENTS TO VARIABLES CORRESPONDING TO
0051  C          THE DIAGRAMS IN THE CLAIM PROGRAMMER'S MANUAL.
0052  C      EQ      = GRDVBS (1)
0053  C      SLOPI = GRDVBS (2)
0054  C      TLSB  = GRDVBS (3)

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0055      QAR      = GRDVS (4)
0056      IF(SLOP.EQ.QAR) SLOP=SLOP+.001
0057 C      CONVERT COG TO DOLLARS
0058      COGO = COG / 100.
0059 C      CALCULATE THE AREA OF THE CROSS-SECTION OF THE PART
0060 C      OF THE SPOIL BANK THAT IS TO BE MOVED.
0061 C      CONVERT THE HEIGHT OF THE SPOIL BANK FROM
0062 C      FEET TO YARDS.
0063      BQ1 = BQ/3.
0064      BAR = SLOPI
0065      BAQ = BAR - QAR
0066      BQA = 90. + QAR
0067      ABQ = 180. - BAQ - BQA
0068 C      'CDTR' CONVERTS FROM DEGREES TO RADIANS
0069      CDTR = 0.01745
0070      RABQ = ABQ * CDTR
0071      RBQA = BQA * CDTR
0072      RBAQ = BAQ * CDTR
0073      ATBAQ = ((BQ1 * BQ1) * SIN(RABQ) * SIN(RBQA)) / (2* SIN(RBAQ))
0074      BTP = SLOPI
0075      BTQ = BTP + QAR
0076      BQT = 90. - QAR
0077      QBT = 180. - BTQ - BQT
0078      RBQT = BQT * CDTR
0079      RQBT = QBT * CDTR
0080      RBTQ = BTQ * CDTR
0081      ATBTQ = ((BQ1 * BQ1) * SIN(RBQT) * SIN(RQBT)) / (2 * SIN(RBTQ))
0082      ATBAT = ATBAQ + ATBTQ
0083      ATXYS = ATBAT
0084      YWR = SLOP
0085      YXQ = YWR - QAR
0086      XYQ = 90. - YWR
0087      YSX = YWR + QAR
0088      QYS = XYQ
0089      XYS = XYQ + QYS
0090      YXS = YXQ
0091      RXYS = XYS * CDTR
0092      RYXS = YXS * CDTR
0093      RYSX = YSX * CDTR
0094      XY = SQRT((ATXYS * 2. * SIN(RYSX)) / (SIN(RXYS) * SIN(RYXS)) )
0095      YS = SQRT((ATXYS * 2. * SIN(RYXS)) / (SIN(RYSX) * SIN(RXYS)))
0096 C      NOW FIND THE AREA OF TRIANGLE BVY
0097      YQS = BQT
0098      YSQ = YWR + QAR
0099      RQYS = QYS * CDTR
0100      RYSQ = YSQ * CDTR
0101      RYQS = YQS * CDTR
0102      ATYSQ = ((YS * YS) * SIN(RQYS) * SIN(RYSQ)) / (2. * SIN(RYQS))
0103      QS = SQRT( (ATYSQ * 2. * SIN(RQYS)) / ( SIN(RYSQ) * SIN(RYQS)) )
0104      QT = SQRT( (ATBTQ * 2. * SIN(RQBT)) / ( SIN(RBQT) * SIN(RBTQ)) )
0105      TS = QS - QT
0106      VST = YSQ
0107      STV = 180. - BTQ
0108      TVS = 180. - VST - STV
0109      RSTV = STV * CDTR
0110      RTVS = TVS * CDTR

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0111      VS = (SIN(RSTV) * TS ) / SIN(RTVS)
0112      YV = YS - VS
0113      YBV = QBT
0114      BVY = TVS
0115      BYV = 180. - YBV - BVY
0116      RBVY = BVY * CDTR
0117      RBYV = BYV * CDTR
0118      RYBV = YBV * CDTR
0119      C      ATBVY IS THE AREA OF TRIANGLE BVY
0120      ATBVY = ((YV * YV) * SIN(RBVY) * SIN(RBYV)) / (2. * SIN(RYBV))
0121      C      NOW FIND THE AREA OF TRIANGLE BUY
0122      BY = ( SIN(RBVY) * YV ) / SIN(RYBV)
0123      UBY = ABQ
0124      BUY = BAR - YWR
0125      BYU = 180. - UBY - BUY
0126      RUBY = UBY * CDTR
0127      RBYU = BYU * CDTR
0128      RBUY = BUY * CDTR
0129      ATBUY = ((BY * BY) * SIN(RUBY) * SIN(RBYU)) / (2. * SIN(RBUY))
0130      C      TOTAL AREA TO BE MOVED = SUM OF AREAS OF LEFT AND
0131      C      RIGHT TRIANGLES
0132      AREA = ATBVY + ATBUY
0133      XS = (SIN(RXYS) * YS) / SIN(RYXS)
0134      C      XS IS THE WIDTH OF THE FINAL SPOIL BANK.
0135      C      CONVERT TO FEET
0136      WIDTH = XS * 3.
0137      C      CALCULATE THE PERCENT OF THE TOTAL LENGTH OF THE
0138      C      SPOIL BANKS
0139      PLEN = (PCT /100.) * TLSB
0140      C      CALCULATE THE VOLUME
0141      VOL = PLEN * AREA
0142      C      CALCULATE THE COST
0143      COST = VOL * COGO
0144      C      CALCULATE THE COST PER ACRE
0145      ACRES = (PLEN * XS)/4840.
0146      CPA = COST/ACRES
0147      IF(SLOP.NE.SLOP1) GO TO 150
0148      VOL = 0.
0149      COST = 0.
0150      CPA = 0.
0151      150 CONTINUE
0152      IF(KODE.EQ.1) TSMAX=WIDTH
0153      IF(KODE.NE.2) RETURN
0154      TBL5(JCOUNT) = SLOP
0155      TBLV(JCOUNT) = VOL
0156      TBLT(JCOUNT) = COST
0157      TBLA(JCOUNT) = WIDTH
0158      RETURN
0159      END
0160      END$

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&DLGE T=00004 IS ON CR00015 USING 00036 BLKS R=0244

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0001  FTN4
0002                SUBROUTINE DLGE
0003  C                --- DRAGLINE GRADING EXECUTIVE ---
0004  C
0005  C LEVEL 2
0006  C
0007  C DLGE IS ACCESSED BY GDE TO GRADE THE SPOILS
0008  C TO THE FINAL TOPOGRAPHY SPECIFIED BY THE USER.
0009  C
0010  C GRAPHS DISPLAYING THE DRAGLINE RELATIONSHIPS :
0011  C     FINAL SLOPE VS. VOLUME GRADED,
0012  C     FINAL SLOPE VS. GRADING COST,
0013  C     AND FINAL SLOPE VS. FINAL WIDTH (OPENING CUT)
0014  C     OR FINAL SLOPE VS. COST PER ACRE (MINE RUN AND OR FINAL CUT)
0015  C ARE AVAILABLE AT THE USER'S REQUEST.
0016  C
0017  C RECOMMENDED SLOPE AND PERCENT PAIRS ARE ALSO PRESENTED
0018  C AND MAY BE USED AS DISPLAYED, OR EDITED ACCORDING TO THE
0019  C USER'S PREFERENCE.
0020  C
0021  C SUMMARY TABLES DISPLAYING THE VOLUMES AND COSTS
0022  C ASSOCIATED WITH GRADING TO THE USER SPECIFIED FINAL
0023  C TOPOGRAPHY ARE AVAILABLE AT USER REQUEST ON THE
0024  C TERMINAL OR THE LINE PRINTER.
0025  C
0026  C THE CALLING SEQUENCE IS :      CALL DLGE
0027  C
0028  C SUBROUTINES SCHEDULED BY DLGE ARE :
0029  C
0030  C     DLRLE TO PRESENT THE DRAGLINE RELATIONSHIPS
0031  C     DLRSL TO READ THE RECOMMENDED SLOPE/PERCENT PAIRS
0032  C     DLDCS TO DISPLAY THE CURRENT SLOPE/PERCENT PAIRS
0033  C     DLISP TO ALLOW USER INPUT OF THE SLOPE/PERCENT PAIRS
0034  C     DLST TO DISPLAY THE SUMMARY TABLE OF VOLUMES AND COSTS
0035  C     DLGCO TO COMPUTE GRADING COSTS AND VOLUMES FOR THE OPENING CUT
0036  C     DLGCM TO COMPUTE GRADING COSTS AND VOLUMES FOR THE MINE RUN
0037  C     DLGCF TO COMPUTE GRADING COSTS AND VOLUMES FOR THE FINAL CUT
0038  C
0039  C
0040  C DLGE USES THE TCS ROUTINES : ERASE AND HOME
0041  C
0042  C LOCAL VARIABLES :
0043  C
0044  C "ACRES" IS THE GRADED AREA FOR A SPECIFIC SLOPE/PERCENT
0045  C     PAIR (IN ACRES)
0046  C "CPAC" IS THE COST PER ACRE FOR A SPECIFIC SLOPE/PERCENT
0047  C     PAIR (IN DOLLARS/ACRE)
0048  C "CST" IS THE COST OF GRADING FOR A SPECIFIC SLOPE/PERCENT
0049  C     PAIR (IN DOLLARS)
0050  C "IANS" IS THE LOCAL ANSWER CELL
0051  C "NUMB" IS THE NUMBER OF SLOPE/PERCENT PAIRS (AS DEFINED IN DLISP)
0052  C "PRCT" IS THE PERCENT ARRAY (AS DEFINED IN DLISP)
0053  C "SLPE" IS THE SLOPE ARRAY (AS DEFINED IN DLISP)
0054  C "TLSB" IS THE HYPOTHETICAL TOTAL LENGTH OF THE MINE RUN
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0055 C          SPOILS (IN FEET)
0056 C "TOTCST" IS THE TOTAL COST OF GRADING (IN DOLLARS)
0057 C "TOTVOL" IS THE TOTAL VOLUME GRADED (IN CUBIC YARDS)
0058 C "VOL"    IS THE VOLUME GRADED FOR A SPECIFIC SLOPE/PERCENT
0059 C          PAIR (IN CUBIC YARDS)
0060 C "WIDTH" IS THE FINAL WIDTH OF THE OPENING CUT SPOIL BANK (IN FEET)
0061 C
0062 C LABEL COMMON ALTRN AND LABEL COMMON TABLE ARE DECLARED
0063 C
0064 C DLGE IS SWAPPED IN BY PROGRAM DLGEX
0065 C
0066 C THIS ROUTINE WAS WRITTEN BY GREEN
0067 C (PATTERNERED AFTER "GRADE" BY EASTMAN)
0068 C
0069 C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0070 C =====
0071 C
0072 C      TEKTRONIX COMMON
0073 C
0074 C      COMMON ITEK (45)
0075 C
0076 C      LOGICAL UNITS AND COMMON LOCATION
0077 C
0078 C      COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0079 C
0080 C      POINTERS
0081 C
0082 C      COMMON EXIT      ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0083 C      COMMON IOPTN     ,IOVR(7),IFNTR  ,ISOC(6),ISUB(8)
0084 C      COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT  ,LUO
0085 C      COMMON MODE      ,NANM      ,NCLI      ,NGEN      ,NGRW
0086 C      COMMON NOVR      ,NSECTS   ,NSOC      ,NSUB      ,NSUR
0087 C      COMMON NTOP      ,NU        ,NVEG
0088 C
0089 C      GRADING PARAMETERS
0090 C
0091 C      COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCFA(5)
0092 C      COMMON GROVBS(5),HWHT(5,10),HWSL1(5,10),NSFP(5),PCEQ19(4)
0093 C      COMMON PERCNT(5,10),REHCPY(5),REHVOL(5),SLOPE(5,10),WBP
0094 C
0095 C      CATEGORY TEXT
0096 C
0097 C      COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0098 C      COMMON OVBD(11,13),SBSL(13), SCEC(33,13),SWHY(44,13)
0099 C      COMMON TPSSL(49,13),VGTA(15,13)
0100 C
0101 C      EXPECTATION VALUES
0102 C
0103 C      COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0104 C      COMMON OVVRBD(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0105 C      COMMON TOPSOI(33,6),VEGETA(10,6)
0106 C
0107 C      CATEGORY RESPONSES
0108 C
0109 C      COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0110 C      COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)

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0111      COMMON RTOPSO(9),RVEGET(2)
0112 C
0113 C      FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0114 C
0115      COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHM
0116      COMMON CABS(2),CAC,CACF,CADF,CADH
0117      COMMON CADS,CAEAF,CAHSAF,CAHSTS,CAIF
0118      COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0119      COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0120      COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0121 C
0122      INTEGER EXIT,CLMA,GDES,GWHY,OVRD,SBSL
0123      INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0124      INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0125      INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0126      INTEGER VEGETA,ANIMAL
0127      INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0128      INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0129      INTEGER RCLTEC,TTL
0130 C
0131      INTEGER COMMON (1)
0132      EQUIVALENCE (COMMON (1), ITEK (1))
0133      EQUIVALENCE (IARY (1), LUT)
0134      EQUIVALENCE (IARY2 (1), ISTRK)
0135      EQUIVALENCE (IARY2 (2), ISECT)
0136      EQUIVALENCE (IARY2 (3), ICODE)
0137      EQUIVALENCE (IARY2 (4), LEN)
0138 C
0139      COMMON /TABLE/
0140      >      TBLV, TBLT, TBLA, TBLs, JCOUNT,TSMIN,KODE,
0141      >      TSMAX,TVMIN,TVMAX,TAMIN,TAMAX,TTMIN,TTMAX
0142 C
0143      DIMENSION TBLV(12),TBLT(12),TBLA(12),TBLs(12)
0144 C
0145      LOGICAL LER
0146      DIMENSION SLPE(10),PRCT(10)
0147 C
0148 C      VIEW GRAPHS OR TABLES ? (CRT)
0149      5      IF(LER) CALL ERASE
0150      IF(LER) CALL HOME
0151      WRITE(LUT,1000)
0152      1000 FORMAT(1X'SELECT ONE OF THE FOLLOWING'/
0153      >      1X'1 -> VIEW GRAPHS OF THE DRAGLINE RELATIONSHIPS'/
0154      >      1X'2 -> VIEW TABLES OF THE DRAGLINE RELATIONSHIPS'/
0155      >      1X'0 -> NONE OF THE ABOVE'/
0156      >      1X'ENTER YOUR SELECTION -> _')
0157      7 READ(LUT,*) IANS
0158      IF(IANS.EQ.0) GOTO 25
0159      IF(LER.AND.IANS.GE.1.AND.IANS.LE.2) GOTO 20
0160      IF(.NOT.LER.AND.IANS.EQ.2) GOTO 20
0161      WRITE(LUT,1010)
0162      1010 FORMAT(/5X'ERROR-> ILLEGAL ENTRY. RE-INPUT -> _')
0163      GOTO 7
0164 C      SCHEDULE THE DRAGLINE RELATIONSHIP EXECUTIVE
0165      20 IFNTR=IANS
0166      CALL ILRLE

```



```

0167         IF(IPNTR.NE.3) GOTO 5
0168 C         GRADE SPOILS ONLY OPTION ?
0169 25     IF(MODE.NE.4) GOTO 49
0170 C         INPUT SLOPES AND PERCENTS FOR GRADE SPOILS ONLY
0171 27     CALL DLISF(PRCT,SLPE,NUMB)
0172         DO 30 K=1,NUMB
0173             SLOPE(1,K)=SLPE(K)
0174 30     PERCNT(1,K)=PRCT(K)
0175         LUO=1
0176         NSFP(1)=NUMB
0177         CALL DLST
0178         RETURN
0179 C         READ THE RECOMMENDATIONS FOR FINAL TOPOGRAPHY
0180 49     KODE=1
0181         IF(MODE.EQ.2.AND.IOPTN.NE.1) GOTO 50
0182         WRITE(LUT,99)
0183 99     FORMAT(///,1X'ONE MOMENT, PLEASE.....')
0184         CALL DLKSL
0185         IF(EXIT.EQ.-1) STOP 1
0186 C         DISPLAY THE CURRENT SLOPE/PERCENT PAIRS AND ALLOW
0187 C         USE MODIFICATION TO THEM
0188 50     CALL DLDCS
0189 C         FIGURE THE PERCENTAGE OF THE AREA EQUAL TO 19 DEGREES
0190         DO 55 J = 2, 5
0191             PCEQ19(J-1) = 0.
0192         DO 54 I = 1, NSFP(J)
0193             IF(SLOPE(J,I).LT.19) GOTO 54
0194             PCEQ19(J-1) = PCEQ19(J-1) + PERCNT(J,I) / 100.
0195 54     CONTINUE
0196 55     CONTINUE
0197 C         COMPUTE GRADING COSTS
0198         GOTO(60,100,150) RGENDE(2)
0199 C         ----- OPENING CUT OPTION -----
0200 60     DO 70 J=1,5
0201         TOTVOL = 0.
0202         TOTCST = 0.
0203         ACRES = 0.
0204         AREA(J) = 0.
0205         IF(NSFP(J).EQ.0) 65, 67
0206 65     GCFA(J) = 0.
0207         GOTO 70
0208 67     DO 69 I = 1, NSFP(J)
0209         CALL DLGCO(SLOPE(J,I),PERCNT(J,I),VOL,CST,CPAC,GRIVRS,
0210 >             COGO,WIDTH)
0211         TOTVOL = TOTVOL + VOL
0212         TOTCST = TOTCST + CST
0213         ACRES = CST/CPAC
0214         AREA(J) = AREA(J) + ACRES
0215 69     CONTINUE
0216         GCFA(J) = TOTCST / AREA(J)
0217 70     CONTINUE
0218         GOTO 500
0219 C         ----- MINE RUN OPTION -----
0220 100    DO 120 J = 1,5
0221         TOTVOL = 0.
0222         TOTCST = 0.

```



```

0223      DO 110 I = 1, NSPP(J)
0224      CALL DLGCM(SLOPE(J,I),PERCNT(J,I),VOL,CST,TLSE,GRDVBS,COGO)
0225      TOTVOL = TOTVOL + VOL
0226      TOTCST = TOTCST + CST
0227      ACRES = ((TLSE * PERCNT(J,I)/100.) * (GRDVBS(1)/3.) ) / 4840.
0228      CPAC = CST/ACRES
0229      110 CONTINUE
0230      GCFA(J) = TOTCST / GRDVBS(3)
0231      120 AREA(J) = GRDVBS(3)
0232      GOTO 500
0233      C      ----- FINAL CUT OPTION -----
0234      150 DO 170 J = 1, 5
0235          TOTVOL = 0.
0236          TOTCST = 0.
0237          AREA(J) = 0.
0238          IF(NSPP(J).EQ.0) 151, 152
0239      151 GCFA(J) = 0.
0240      GOTO 170
0241      152 DO 160 I = 1, NSPP(J)
0242          CALL DLGCF(SLOPE(J,I),PERCNT(J,I),WBF,GRDVBS,
0243              COGO,VOL,CST,ACRES)
0244          TOTVOL = TOTVOL + VOL
0245          TOTCST = TOTCST + CST
0246          AREA(J) = AREA(J) + ACRES
0247      160 CPAC = CST / ACRES
0248          GCFA(J) = TOTCST / AREA(J)
0249      170 CONTINUE
0250      C      OFFER SUMMARY TABLES
0251      500 CALL DLST
0252          RETURN
0253          END
0254      END#

```

&DLIOF T=00004 IS ON CR00015 USING 00020 BLKS R=0000

```
0001  FTN4
0002                SUBROUTINE DLIOF
0003  C      --- DRAGLINE : INPUT RECOMMENDED SLOPES AND PERCENTS ---
0004  C      ---      (OPENING AND FINAL CUT OPTIONS)
0005  C
0006  C LEVEL 4
0007  C
0008  C DLIOF IS ACCESSED BY DLRSL TO READ THE RECOMMENDED
0009  C SLOPE/PERCENT PAIRS FOR THE OPENING AND FINAL CUT.
0010  C
0011  C THE CALLING SEQUENCE IS :      CALL DLIOF
0012  C
0013  C DLIOF USES THE SYSTEM ROUTINE "SPOLU" TO ACCESS THE DATA
0014  C FILE "DLRSOF".
0015  C
0016  C "FILID" IS THE ARRAY CONTAINING THE THREE WORD ID SEGMENT
0017  C OF THE FILE "DLRSOF".
0018  C
0019  C "EXIT" IS SET TO -1 IF THE FILE ACCESS FAILS
0020  C
0021  C THIS ROUTINE WAS WRITTEN BY GREEN
0022  C
0023  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0024  C =====
0025  C
0026  C      TEKTRONIX COMMON
0027  C
0028  C      COMMON ITEK (45)
0029  C
0030  C      LOGICAL UNITS AND COMMON LOCATION
0031  C
0032  C      COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0033  C
0034  C      POINTERS
0035  C
0036  C      COMMON EXIT      ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0037  C      COMMON IOPTN    ,IOVR(7),IPNTR  ,ISOC(6),ISUB(8)
0038  C      COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT  ,LUO
0039  C      COMMON MODE     ,NANM      ,NCLI      ,NGEN      ,NGRW
0040  C      COMMON NOVR     ,NSECTS   ,NSOC      ,NSUB      ,NSUR
0041  C      COMMON NTOP     ,NU       ,NVEG
0042  C
0043  C      GRADING PARAMETERS
0044  C
0045  C      COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCPA(5)
0046  C      COMMON GROVBS(5),HWHI(5,10),HWSLI(5,10),NSPP(5),PCEQ19(4)
0047  C      COMMON PERCNT(5,10),REHCPY(5),REHVOL(5),SLOPE(5,10),WBP
0048  C
0049  C      CATEGORY TEXT
0050  C
0051  C      COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0052  C      COMMON OVRD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0053  C      COMMON TPSL(49,13),VGTA(15,13)
0054  C
```

```

0055 C      EXPECTATION VALUES
0056 C
0057      COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0058      COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0059      COMMON TOPSOI(33,6),VEGETA(10,6)
0060 C
0061 C      CATEGORY RESPONSES
0062 C
0063      COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0064      COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0065      COMMON RTOPSO(9),RVEGET(2)
0066 C
0067 C      FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0068 C
0069      COMMON CAAHM,CABAH,CABFN(3),CABFF(3),CABHM
0070      COMMON CABS(2),CAC,CACF,CADF,CADH
0071      COMMON CADS,CAEAF,CAHSAF,CAHSTS,CAIP
0072      COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0073      COMMON CSTRF,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0074      COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0075 C
0076      INTEGER EXIT,CLMA,GDES,GWHY,OVRD,SBSL
0077      INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0078      INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0079      INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0080      INTEGER VEGETA,ANIMAL
0081      INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0082      INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0083      INTEGER RCLTEC,TTL
0084 C
0085      INTEGER COMMON (1)
0086      EQUIVALENCE (COMMON (1), ITEK (1))
0087      EQUIVALENCE (IARRY (1), LUT)
0088      EQUIVALENCE (IARY2 (1), ISTRK)
0089      EQUIVALENCE (IARY2 (2), ISECT)
0090      EQUIVALENCE (IARY2 (3), ICODE)
0091      EQUIVALENCE (IARY2 (4), LEN)
0092 C
0093      LOGICAL LER
0094      INTEGER FILID(3)
0095      DATA FILID/2HDL,2HRS,2HOF/
0096      DATA ICR/15/
0097 C
0098 C      RE-INITIALIZE THE SLOPES AND PERCENTS
0099      DO 2 I = 1, 5
0100      NSPP (I) = 0
0101      DO 1 J = 1,10
0102      SLOPE (1,J) = 0.
0103      PERCNT (1,J) = 0.
0104      1 CONTINUE
0105      2 CONTINUE
0106 C      OPEN DLR5OF FOR READ
0107      CALL SPOLU(LUF,FILID,2,1,ICR)
0108      IF(LUF.LT.0) GOTO 500
0109 C      READ THE NUMBER OF PERCENT PAIRS IN EACH ALTERNATIVE
0110      DO 10 I=1,5

```



```

0111      10 READ(LUF,1000) NSPP(I)
0112      1000 FORMAT(I2)
0113 C          NOW READ IN THE PERCENTAGES
0114      DO 20 I=1,5
0115      IF(NSPP(I).EQ.0) GOTO 20
0116      DO 15 J=1,NSPP(I)
0117      15 READ(LUF,1010) PERCENT(I,J)
0118      1010 FORMAT(F5.1)
0119      20 CONTINUE
0120 C          NOW READ IN THE SLOPES
0121      DO 35 I=1,5
0122      IF(NSPP(I).EQ.0) GOTO 35
0123      DO 30 J=1,NSPP(I)
0124      30 READ(LUF,1010) SLOPE(I,J)
0125      35 CONTINUE
0126 C          ** ALL DONE. ** CLOSE FILE.
0127      CALL SPOLU(LUF,FILID,2,2,ICR)
0128      RETURN
0129 C          ** ERROR ON OPEN : GIVE MESSAGE **
0130      500 WRITE(6,1020) LUF
0131      1020 FORMAT(1H1,10X"ERROR ON OPEN RSPOF. LUF = "F13.5)
0132      EXIT = -1
0133      RETURN
0134      END
0135  END$

```

&DLIRM 1=00004 1S ON CR00015 USING 00019 BLKS R=0000

```
0001  FTN4
0002                      SUBROUTINE DLIRM
0003  C      ---DRAGLINE : INPUT RECOMMENDED SLOPES (MINE RUN) ---
0004  C
0005  C  LEVEL 4
0006  C
0007  C  DLIRM IS ACCESSED BY DLRSI TO READ THE RECOMMENDED FINAL
0008  C  SLOPES AND PERCENTS FOR THE MINE RUN OPTION
0009  C
0010  C  THE CALLING SEQUENCE IS :          CALL DLIRM
0011  C
0012  C  DLIRM USES THE SYSTEM ROUTINE "SPOLU" TO ACCESS THE DATA
0013  C  FILE "DLRSFM"
0014  C
0015  C  "FILID" IS THE ARRAY CONTAINING THE ID SEGMENT OF THE
0016  C  FILE "DLRSFM".
0017  C
0018  C  "EXIT" IS SET TO -1 IF THE FILE ACCESS FAILS
0019  C
0020  C  THIS ROUTINE WAS WRITTEN BY GREEN
0021  C
0022  C  ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0023  C  =====
0024  C
0025  C      TEKTRONIX COMMON
0026  C
0027  C      COMMON ITEK (45)
0028  C
0029  C      LOGICAL UNITS AND COMMON LOCATION
0030  C
0031  C      COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0032  C
0033  C      POINTERS
0034  C
0035  C      COMMON EXIT      ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0036  C      COMMON IOPTN     ,IOVR(7),IPNTR  ,ISOC(6),ISUB(8)
0037  C      COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT  ,LUO
0038  C      COMMON MODE      ,NANM      ,NCLI      ,NGEN      ,NGRW
0039  C      COMMON NOVR      ,NSECTS    ,NSOC      ,NSUB      ,NSUR
0040  C      COMMON NTOP      ,NU        ,NVEG
0041  C
0042  C      GRADING PARAMETERS
0043  C
0044  C      COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCPA(5)
0045  C      COMMON GROVBS(5),HWHT(5,10),HWSLI(5,10),NSPP(5),PCEQ19(4)
0046  C      COMMON PERCNT(5,10),REHCPY(5),REHVOL(5),SLOPE(5,10),WBP
0047  C
0048  C      CATEGORY TEXT
0049  C
0050  C      COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0051  C      COMMON OVRD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0052  C      COMMON TPST(49,13),VGTA(15,13)
0053  C
0054  C      EXPECTATION VALUES
```

```

0055 C
0056 COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0057 COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0058 COMMON TOPSOI(33,6),VEGETA(10,6)
0059 C
0060 C CATEGORY RESPONSES.
0061 C
0062 COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0063 COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0064 COMMON RTOPSO(9),RVEGET(2)
0065 C
0066 C FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0067 C
0068 COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHM
0069 COMMON CABS(2),CAC,CACP,CADF,CADH
0070 COMMON CADS,CAEAF,CAHSAF,CAHSTS,CAIP
0071 COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0072 COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0073 COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0074 C
0075 INTEGER EXIT,CLMA,GDES,GWHY,OVBD,SBSL
0076 INTEGER SOEC,SWHY,TPSL,VGTA,ANIM
0077 INTEGER CLIMAT,GENDES,GRWHYD,OVREBDN
0078 INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0079 INTEGER VEGETA,ANIMAL
0080 INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0081 INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0082 INTEGER RCLTEC,TTL
0083 C
0084 INTEGER COMMON (1)
0085 EQUIVALENCE (COMMON (1), ITEX (1))
0086 EQUIVALENCE (IARY (1), LUT)
0087 EQUIVALENCE (IARY2 (1), ISTRK)
0088 EQUIVALENCE (IARY2 (2), ISECT)
0089 EQUIVALENCE (IARY2 (3), ICODE)
0090 EQUIVALENCE (IARY2 (4), LEN)
0091 C
0092 LOGICAL LER
0093 C
0094 INTEGER FILID (3)
0095 C
0096 DATA FILID/2HDL,2HRS,2HPM/
0097 DATA ICR/15/
0098 C
0099 C THE MINIMUM FINAL SLOPE CAN BE NO GREATER THAN THE
0100 C INITIAL SLOPE OF THE AREA. THEREFORE, WE DEFINE
0101 C THESE SLOPES HERE, RATHER THAN IN DLRSPM
0102 DO 10 I=1,5
0103 10 SLOPE(I,1) = GRDVBS(4)
0104 C OPEN DLRSPM FOR READ :
0105 CALL SPOLU(LUF,FILID,2,1,ICR)
0106 IF(LUF.LT.0) GOTO 500
0107 C READ IN THE NUMBER OF PERCENT PAIRS FOR EACH ALTERNATIVE
0108 DO 15 I=1,5
0109 15 READ(LUF,1000) NSPP(I)
0110 1000 FORMAT(I2)

```



```

0111 C          NOW READ IN THE PERCENTAGES
0112          DO 25 I=1,5
0113          DO 20 J=1,NSPP(I)
0114          20 READ(LUF,1010) PERCNT(I,J)
0115          1010 FORMAT(F5.1)
0116          25 CONTINUE
0117 C          NOW READ IN THE SLOPES
0118          DO 35 I=1,5
0119          DO 30 J=2,NSPP(I)
0120          30 READ(LUF,1010) SLOPE(I,J)
0121          35 CONTINUE
0122 C          ** ALL DONE ** CLOSE THE FILE.
0123          CALL SPOLU(LUF,FILID,2,2,ICR)
0124          RETURN
0125 C ** ERROR ON OPEN : GIVE MESSAGE
0126          500 WRITE(6,1020) LUF
0127          1020 FORMAT(1H1,10X"ERROR ON OPEN DLRSPM. LUF ="F13.5)
0128          EXIT  = -1
0129          RETURN
0130          END
0131 END$

```

```

0001  FTN4
0002      SUBROUTINE DLISP (PRCT,SLPE,NUMB)
0003  C --- DRAGLINE : INPUT SLOPES AND PERCENTS ---
0004  C
0005  C LEVEL 4
0006  C
0007  C DLISP IS ACCESSED BY DLGE AND DLDCS TO ALLOW USER DEFINITION
0008  C OF THE DRAGLINE SLOPE/PERCENT PAIRS
0009  C
0010  C THE CALLING SEQUENCE IS :
0011  C
0012  C      CALL DLISP (PRCT,SLPE,NUMB)
0013  C
0014  C WHERE
0015  C
0016  C      PRCT IS THE PERCENT ARRAY FOR CURRENT LUO
0017  C      SLPE IS THE SLOPE ARRAY FOR CURRENT LUO
0018  C      NUMB IS THE NUMBER OF SLOPE/PERCENT PAIRS ENTERED
0019  C
0020  C DLISP SCHEDULES MNMXF TO DETERMINE THE MINIMUM AND
0021  C MAXIMUM FINAL SLOPE VALUES CURRENTLY PERMITTED
0022  C
0023  C DLISP USES THE TCS ROUTINES : ERASE AND HOME
0024  C AND DECLARES LABEL COMMON ALTRN
0025  C
0026  C THE LOCAL VARIABLES ARE :
0027  C
0028  C      CLLMIT -> CROPLAND LIMIT
0029  C      IANS   -> ANSWER CELL
0030  C      IPTK   -> INDEX TO IREC ARRAY
0031  C      IREC   -> ARRAY CONTAINING RECOMMENDED PERCENTAGE MIXTURES
0032  C              FOR THE MINE RUN OPTION
0033  C      IREC1  -> ARRAY CONTAINING RECOMMENDED PERCENTAGE MIXTURES
0034  C              FOR THE OPENING AND FINAL CUT OPTIONS (NAT. VEG.)
0035  C      IREC2  -> ARRAY CONTAINING RECOMMENDED PERCENTAGE MIXTURES
0036  C              FOR THE OPENING AND FINAL CUT OPTIONS (WLIFE & WAT REC)
0037  C      SLMIN  -> MINIMUM PERMISSABLE FINAL SLOPE VALUE
0038  C      TOTPCT-> CUMULATIVE PERCENTAGE
0039  C      UPLIM  -> UPPER LIMIT FOR FINAL SLOPE VALUE
0040  C
0041  C THIS ROUTINE WAS WRITTEN BY GREEN
0042  C
0043  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0044  C =====
0045  C
0046  C      TEKTRONIX COMMON
0047  C
0048  C      COMMON ITEK (45)
0049  C
0050  C      LOGICAL UNITS AND COMMON LOCATION
0051  C
0052  C      COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0053  C
0054  C      POINTERS

```

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0055 C
0056 COMMON EXIT ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0057 COMMON IOPTN ,IOVR(7),IPNTR ,ISOC(6),ISUB(8)
0058 COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT ,LUO
0059 COMMON MODE ,NANM ,NCLI ,NGEN ,NGRW
0060 COMMON NOVR ,NSECTS ,NSOC ,NSUB ,NSUR
0061 COMMON NTOP ,NU ,NVEG
0062 C
0063 C GRADING PARAMETERS
0064 C
0065 COMMON AREA(5),BENLEN(5,10),BENW1(5,10),COGO,GCPA(5)
0066 COMMON GRDVB(5),HWHT(5,10),HWSLI(5,10),NSPP(5),PCEQ19(4)
0067 COMMON PERCNT(5,10),REHCPY(5),REHVOL(5),SLOPE(5,10),WBP
0068 C
0069 C CATEGORY TEXT
0070 C
0071 COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0072 COMMON OVBD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0073 COMMON TPSL(49,13),VGTA(15,13)
0074 C
0075 C EXPECTATION VALUES
0076 C
0077 COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0078 COMMON OVRBD(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0079 COMMON TOPSOI(33,6),VEGETA(10,6)
0080 C
0081 C CATEGORY RESPONSES
0082 C
0083 COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0084 COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0085 COMMON RTOPSO(9),RVEGET(2)
0086 C
0087 C FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0088 C
0089 COMMON CAAHM,CABAH,CABFN(3),CABFF(3),CABHM
0090 COMMON CABS(2),CAC,CACP,CADF,CADH
0091 COMMON CADIS,CAEAF,CAHSF,CAHSTS,CAIP
0092 COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0093 COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0094 COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0095 C
0096 INTEGER EXIT,CLMA,GDES,GWHY,OVBD,SBSL
0097 INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0098 INTEGER CLIMAT,GENDES,GRWHYD,OVRBD
0099 INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0100 INTEGER VEGETA,ANIMAL
0101 INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0102 INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0103 INTEGER RCLTEC,TTL
0104 C
0105 INTEGER COMMON (1)
0106 EQUIVALENCE (COMMON (1), ITEK (1))
0107 EQUIVALENCE (IARRY (1), LUT)
0108 EQUIVALENCE (IARY2 (1), ISTRK)
0109 EQUIVALENCE (IARY2 (2), ISECT)
0110 EQUIVALENCE (IARY2 (3), ICODE)

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0111      EQUIVALENCE (IARY2 (4), LEN)
0112 C
0113      LOGICAL LER
0114 C
0115      DIMENSION PRCT(10),SLPE(10)
0116 C
0117      INTEGER ALTN(6,4)
0118 C
0119      COMMON / ALTRN / ALTN
0120 C
0121      INTEGER IREC(4,3), IREC1(3), IREC2(2,2)
0122      DATA IREC/50,35,50,75,25,40,10,25,
0123 -          25,25,40,0/
0124      DATA IREC1/50,25,25/
0125      DATA IREC2/50,75,50,25/
0126      DATA CLLMIT/5.7/
0127 C
0128 C          SET UPPER AND LOWER LIMITS
0129      KCODE=2
0130      CALL MNMXF(LUT,MODE,RGENDE(2),GRDVBS,UPLIM,SLMIN,KCODE)
0131      IF(KCODE.NE.3) GOTO 3
0132      IF(MODE.EQ.4) GOTO 3
0133      WRITE(LUT,37)
0134 37 FORMAT(/5X"DUE TO THE INITIAL GEOMETRY AND/OR CUT OPTION"/
0135 >          5X"OTHER FINAL SLOPES VALUES CANNOT BE ENTERED")
0136      RETURN
0137 3      IF(UPLIM.LT.19.) KCODE=1
0138      IF(MODE.NE.4.AND.LUD.EQ.1) UPLIM=CLLMIT
0139 C          DISPLAY INSTRUCTIONS
0140 5      IF(LER) CALL ERASE
0141      IF(LER) CALL HOME
0142      IF(MODE.NE.4) WRITE(LUT,1000) (ALTN(LUD,J),J=1,4)
0143      IF(MODE.EQ.4) WRITE(LUT,1002)
0144      WRITE(LUT,1001)
0145      WRITE(LUT,1020) UPLIM,SLMIN
0146 C          DISPLAY RECOMMENDATIONS
0147      IF( LUD.EQ.1) GOTO 6
0148      IF(KCODE.EQ.1) GOTO 6
0149      IF (RGENDE (2) .EQ. 2) GOTO 4
0150      IFTR = LUD - 2
0151      IF (LUD .EQ. 2) WRITE (LUT,1061) IREC1
0152      IF (LUD .NE. 2) WRITE (LUT,1062) (IREC2 (IFTR,J),J = 1,2)
0153      GOTO 6
0154 4 -IFTR = LUD - 1
0155      WRITE (LUT, 1060) (IREC (IFTR, J), J = 1, 3)
0156 C          USER INPUT -> SLOPE AND PERCENT
0157 6      NUMB = 0
0158      TOTPCT = 0.
0159 7      NUMB = NUMB + 1
0160      IF(NUMB.GT.2.AND.LER) CALL ERASE
0161      IF(NUMB.GT.2.AND.LER) CALL HOME
0162 10 WRITE(LUT,1030) TOTPCT
0163      READ (LUT,*) SLPE (NUMB)
0164      WRITE(LUT,1031)
0165      READ (LUT,*) PRCT (NUMB)
0166      IF (RGENDE(2) .EQ. 2) GOTO 15

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0167         IF (SLPE (NUMB).GE.SLMIN.AND.SLPE (NUMB).LE.UPLIM) GOTO 20
0168         WRITE(LUT,1040)
0169         GOTO 10
0170     15     IF (SLPE (NUMB).GE.SLMIN.AND.SLPE (NUMB).LE.UPLIM) GOTO 20
0171         WRITE(LUT,1040)
0172         GOTO 10
0173     20     TOTPCT = TOTPCT + PRCT (NUMB)
0174         IF(TOTPCT .EQ. 100.) RETURN
0175         IF(TOTPCT .GT. 100. ) 30, 7
0176 C         DOFS ! PERCENTAGE > 100 : INFORM USER
0177     30     WRITE (LUT,1050)
0178     31     READ (LUT, *) IANS
0179         IF(IANS.GE.1.AND.IANS.LE.2) GOTO (5,35) IANS
0180         WRITE(LUT,1111)
0181         GOTO 31
0182     35     TOTPCT = TOTPCT - PRCT (NUMB)
0183         PRCT (NUMB) = 0.
0184         SLPE (NUMB) = 0.
0185         GOTO 10
0186 C         FORMAT STATEMENTS
0187     1000  FORMAT(/,5X'READY TO ACCEPT SLOPE/PERCENT PAIRS FOR '4A2)
0188 C
0189     1001  FORMAT(
0190         >/,3X'> INPUT SLOPE, HIT RETURN, THEN INPUT PERCENT OF THE'/
0191         &3X' AREA YOU WANT COVERED BY THAT SLOPE.'/,
0192         &/,3X'> 10 SLOPE / PERCENT PAIRS ARE ALLOWED.'/)
0193 C
0194     1002  FORMAT(15X'** INPUT FINAL SLOPES - GRADE RUN **')
0195     1010  FORMAT(/,5X'RESTRICTIONS :'/,
0196         &3X'> FINAL SLOPE REQUESTED MUST NOT EXCEED 19 DEGREES'//,
0197         &3X'> FINAL SLOPE MUST BE AT LEAST 11.5 DEGREES'//,
0198         &3X'> TOTAL PERCENTAGE MUST EQUAL 100.')
0199 C
0200     1111  FORMAT(/,5X'**ERROR**. ANSWER MUST BE 1 OR 2. RE-ENTER ->_')
0201     1020  FORMAT(/,5X'RESTRICTIONS :'/,
0202         &3X'> FINAL SLOPE MUST NOT EXCEED 'F4.2' DEGREES'//,
0203         &3X'> FINAL SLOPE MUST BE AT LEAST 'F5.2' DEGREES'//,
0204         &3X'> TOTAL PERCENTAGE MUST EQUAL 100')
0205 C
0206     1060  FORMAT(/,5X'WE RECOMMEND THE FOLLOWING RANGE OF SLOPES:'//,
0207         + 5X,I2'% LESS THAN OR EQUAL TO 5.7 DEGREES'//,
0208         + 5X,I2'% GREATER THAN 5.7 AND LESS THAN OR EQUAL'//,
0209         + 7X'TO 11.5 DEGREES'//,
0210         + 5X,I2'% GREATER THAN 11.5 AND LESS THAN OR EQUAL'//,
0211         + 7X'TO 19 DEGREES')
0212     1061  FORMAT(/,5X'WE RECOMMEND THE FOLLOWING RANGE OF SLOPES:'//,
0213         +5X,I2'% GREATER THAN OR EQUAL TO 11.5, AND LESS'//,
0214         +5X'THAN 14 DEGREES'//,
0215         + 5X,I2'% GREATER THAN OR EQUAL TO 14, AND LESS'//,
0216         +5X'THAN 17 DEGREES'//,
0217         +5X,I2'% GREATER THAN OR EQUAL TO 17, AND LESS'//,
0218         +5X'THAN 19 DEGREES'//)
0219 C
0220     1062  FORMAT(/,5X'WE RECOMMEND THE FOLLOWING RANGE OF SLOPES:'//,
0221         +5X,I2'% GREATER OR EQUAL TO 11.5, AND LESS'//,
0222         +5X'THAN 15 DEGREES'//,

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0223      +5X,I2"% GREATER THAN OR EQUAL TO 15, AND LESS "/",
0224      +5X"THAN 19 DEGREES"//)
0225 C
0226      1030 FORMAT(/,5X"CURRENT PERCENTAGE DEFINED IS :",F6.2," %"/
0227      >          5X"INPUT SLOPE -> _")
0228      1031 FORMAT(5X"INPUT PERCENT -> _")
0229 C
0230      1040 FORMAT(/,5X"ERROR -> SLOPE DOES NOT MEET RESTRICTIONS. RE-INPUT")
0231 C
0232      1050 FORMAT(/,5X"TOTAL PERCENTAGE EXCEEDS 100. "/
0233      >          5X"1 -> START OVER"/
0234      >          5X"2 -> RE-INPUT SLOPE/PERCENT PAIR"/
0235      >          5X"INPUT -> _")
0236 C
0237      END
0238 END$

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&DLMID T=00004 IS ON CR00015 USING 00029 BLKS R=0000

```
0001  FTN4
0002          SUBROUTINE DLMID
0003  C      --- DRAGLINE : MINE RUN INITIAL DATA ---
0004  C
0005  C  LEVEL 2
0006  C
0007  C  DLMID IS ACCESSED BY GDE TO SCHEDULE INPUTS AND EDITS TO
0008  C  THE INITIAL DATA FOR THE DRAGLINE/MINE RUN OPTION
0009  C
0010  C  "IOPTN" IS A SWITCH WHERE :
0011  C      1 - INPUT MODE
0012  C      2 - EDIT MODE
0013  C      3 - TEMPORARY EDIT MODE
0014  C
0015  C  THE CALLING SEQUENCE IS :      CALL DLMID
0016  C
0017  C  DLMID USES THE TCS ROUTINES : ERASE AND HOME
0018  C
0019  C  "IANS" IS THE LOCAL ANSWER CELL
0020  C
0021  C  THIS ROUTINE WAS WRITTEN BY GREEN, BUT PATTERNED AFTER
0022  C  A ROUTINE WRITTEN BY EASTMAN. (GRADE)
0023  C
0024  C  ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0025  C  =====
0026  C
0027  C      TEKTRONIX COMMON
0028  C
0029  C      COMMON ITEK (45)
0030  C
0031  C      LOGICAL UNITS AND COMMON LOCATION
0032  C
0033  C      COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0034  C
0035  C      POINTERS
0036  C
0037  C      COMMON EXIT      ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0038  C      COMMON IOPTN    ,IOVR(7),IPNTR  ,ISOC(6),ISUB(8)
0039  C      COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT  ,LUO
0040  C      COMMON MODE     ,NANM      ,NCLI      ,NGEN      ,NGRW
0041  C      COMMON NOVR     ,NSECTS    ,NSOC      ,NSUB      ,NSUR
0042  C      COMMON NTOP     ,NU        ,NVEG
0043  C
0044  C      GRADING PARAMETERS
0045  C
0046  C      COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCPA(5)
0047  C      COMMON GROUVE(5),HWHT(5,10),HWSLI(5,10),NSPP(5),PCEQ19(4)
0048  C      COMMON PERCNT(5,10),REHCPY(5),REHVOL(5),SLOPE(5,10),WBF
0049  C
0050  C      CATEGORY TEXT
0051  C
0052  C      COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0053  C      COMMON OVRD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0054  C      COMMON TPSL(49,13),VGTA(15,13)
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0055 C
0056 C      EXPECTATION VALUES
0057 C
0058      COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0059      COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0060      COMMON TOPSOI(33,6),VEGETA(10,6)
0061 C
0062 C      CATEGORY RESPONSES
0063 C
0064      COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0065      COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0066      COMMON RTOPSO(9),RVEGET(2)
0067 C
0068 C      FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0069 C
0070      COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHM
0071      COMMON CABS(2),CAC,CACP,CADF,CADH
0072      COMMON CADS,CAEAF,CAHSAF,CAHSTS,CAIP
0073      COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0074      COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0075      COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0076 C
0077      INTEGER EXIT,CLMA,GDES,GWHY,OVRBD,SBSL
0078      INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0079      INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0080      INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0081      INTEGER VEGETA,ANIMAL
0082      INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0083      INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0084      INTEGER RCLTEC,TTL
0085 C
0086      INTEGER COMMON (1)
0087      EQUIVALENCE (COMMON (1), ITEK (1))
0088      EQUIVALENCE (IARY (1), LUT)
0089      EQUIVALENCE (IARY2 (1), ISTRK)
0090      EQUIVALENCE (IARY2 (2), ISECT)
0091      EQUIVALENCE (IARY2 (3), ICODE)
0092      EQUIVALENCE (IARY2 (4), LEN)
0093 C
0094      LOGICAL LER
0095 C      DISPLAY THE TITLE
0096      EXIT=1
0097 1      IF (LER) CALL ERASE
0098      IF (LER) CALL HOME
0099      WRITE (LUT, 1000)
0100 C      DISPLAY CURRENT DATA FOR EDIT MODE (IOPTN = 2)
0101      IF (IOPTN.EQ.1 ) GOTO 30
0102      WRITE (LUT, 1100) (GRDVS (JJ), JJ = 1, 4), COGO
0103 2 READ (LUT, * ) IANS
0104      IF (IANS.EQ.0) GOTO 4
0105      IF (IANS.GE.1.AND.IANS.LE.5 )
0106      >GOTO ( 30, 40, 50, 60, 70 ) IANS
0107      WRITE (LUT, 1110)
0108      GOTO 2
0109 4      IF (IOPTN.EQ.3) IOPTN=1
0110      RETURN

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0111 C          USER INPUT -> DISTANCE BETWEEN SPOIL BANKS
0112      30 WRITE (LUT, 1030)
0113      READ (LUT, *) GRDVBS (1)
0114          IF (IOPTN.NE.1 ) GOTO 1
0115          IF (GRDVBS (1).GE.0.) GOTO 40
0116      EXIT = 0
0117      RETURN
0118 C          USER INPUT -> SLOPE OF THE SPOILS
0119      40 WRITE (LUT, 1040)
0120      READ (LUT, *) GRDVBS (2)
0121      IF (IOPTN.NE.3) GOTO 41
0122      IF (GRDVBS(2).GE.GRDVBS(4).AND.GRDVBS(2).LE.90.) GOTO 1
0123      WRITE(LUT,1066)
0124      GOTO 40
0125      41 IF ( GRDVBS (2).GT.0..AND.GRDVBS (2).LT.90)
0126      >GOTO ( 50,1,1 ) IOPTN
0127      WRITE (LUT, 1045)
0128      GOTO 40
0129 C          USER INPUT -> AREA COVERED BY THE SPOILS
0130      50 WRITE (LUT, 1050)
0131      52 READ (LUT, *) GRDVBS (3)
0132          IF (GRDVBS(3).GT.0) GOTO 55
0133          WRITE(LUT,1075)
0134          GOTO 52
0135      55 IF (IOPTN.NE.1 ) GOTO 1
0136 C          USER INPUT -> SLOPE OF THE AREA
0137      60 WRITE (LUT, 1060)
0138      READ (LUT, *) GRDVBS (4)
0139          IF ( GRDVBS (4).GE.0.AND.GRDVBS (4).LT.GRDVBS (2) )
0140      >GOTO 65
0141      WRITE (LUT, 1065)
0142      GOTO 60
0143      65 IF (GRDVBS(4).GT.5.7) WRITE(LUT,1061)
0144          IF (GRDVBS(4).GT.5.7) CALL BELL
0145          IF (GRDVBS(4).GT.5.7) CALL TINPT(ICHAR)
0146      GOTO(70,1,1) IOPTN
0147 C          USER INPUT -> COST OF GRADING OVERBURDEN
0148      70 WRITE (LUT, 1070)
0149      72 READ (LUT, *) COGO
0150          IF (COGO .GT. 0.) GOTO 75
0151          WRITE(LUT,1075)
0152          GOTO 72
0153      75 IF (IOPTN.NE.1 ) GOTO 1
0154      IOPTN=3
0155      GOTO 1
0156 C          FORMAT STATEMENTS
0157      1000 FORMAT(// "---- DRAGLINE/MINE RUN ----" //)
0158 C
0159      1100 FORMAT(/,5X"CURRENT VALUES FOR THE DATA ARE :",
0160      >7X"1) AVERAGE DISTANCE BETWEEN SPOIL BANK PEAKS:"F9.2,1X,
0161      >"FEET"/,
0162      >7X"2) INITIAL AVERAGE SLOPE OF THE SPOIL BANKS : "F9.2,1X,
0163      >"DEGREES"/,
0164      >7X"3) TOTAL AREA COVERED BY THE SPOIL BANKS      : "F9.2,1X,
0165      >"ACRES"/,
0166      >7X"4) AVERAGE SLOPE OF THE AREA PERPENDICULAR TO"/,

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0167      >7X"   THE SPOIL BANK AXIS                      :F9.2,1X,
0168      >"DEGREES"/,
0169      >7X"5) COST OF GRADING SPOILS                    :F9.2,1X,
0170      >"CENTS/CU.YD"/,
0171      &1X"IF YOU WISH TO CHANGE ANY OF THE ABOVE VALUES, ENTER"/,
0172      &1X"THE NUMBER CORRESPONDING TO THE ITEM YOU WANT TO CHANGE."/,
0173      &1X"IF NO CHANGES ARE DESIRED, ENTER A ZERO -> _")
0174 C
0175 1110 FORMAT(/,5X"ERROR--> ILLEGAL CHOICE.RE-SELECT.-> _")
0176 C
0177 1030 FORMAT(/"AVERAGE DISTANCE BETWEEN SPOIL BANK PEAKS (FEET) -> _")
0178 C
0179 1040 FORMAT(/"INITIAL AVERAGE SLOPE OF THE SPOIL BANKS (DEGREES) -> _")
0180 C
0181 1045 FORMAT(/"ERROR--> INITIAL SLOPE MUST BE GREATER THAN ZERO"/,
0182      &"AND LESS THAN 90 DEGREES.RE-ENTER."/)
0183 C
0184 1050 FORMAT(/"TOTAL AREA COVERED BY THE SPOIL BANKS (ACRES) -> _")
0185 C
0186 1060 FORMAT(/"AVERAGE SLOPE OF THE AREA PERPENDICULAR TO THE"/,
0187      &"SPOIL BANK AXIS (DEGREES) -> _")
0188 C
0189 1061 FORMAT(/1X"***NOTE** CROPLAND WILL NOT BE AVAILABLE AS A"/
0190      >      1X"      RECLAMATION ALTERNATIVE BECAUSE THE"/
0191      >      1X"      GENERAL SLOPE OF THE AREA EXCEEDS"/
0192      >      1X"      5.7 DEGREES",
0193      >      //,1X"HIT THE RETURN TO CONTINUE....._")
0194 C
0195 1065 FORMAT(/"ERROR--> SLOPE MUST BE GREATER THAN ZERO"/
0196      &"AND LESS THAN SPOIL BANK SLOPE."/)
0197 1066 FORMAT(/"ERROR--> SLOPE MUST BE GREATER THAN OR EQUAL"/
0198      &"TO THE GENERAL SLOPE AND LESS THAN 90."/)
0199 C
0200 1070 FORMAT(/"COST OF GRADING SPOILS (CENTS/CU.YD) -> _")
0201 C
0202 1075 FORMAT(/,1X"ERROR-> VALUE MUST BE GREATER THAN ZERO ->_")
0203      END
0204 END$

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&DLOID Y=00004 IS ON CR00015 USING 00028 BLKS R=0000

```
0001  FTN4
0002                      SUBROUTINE DLOID
0003  C      --- DRAGLINE : OPENING CUT INITIAL DATA ---
0004  C
0005  C  LEVEL 2
0006  C
0007  C  DLOID IS ACCESSED BY GDE TO SCHEDULE INPUTS AND EDITS TO
0008  C  THE INITIAL DATA FOR THE DRAGLINE / OPENING CUT OPTION
0009  C
0010  C  'IOPTN' IS A SWITCH WHERE :
0011  C      1 - INPUT MODE
0012  C      2 - EDIT MODE
0013  C      3 - TEMPORARY EDIT MODE
0014  C
0015  C  THE CALLING SEQUENCE IS :      CALL DLOID
0016  C
0017  C  DLOID USES THE TCS ROUTINES : ERASE AND HOME
0018  C
0019  C  'IANS' IS THE LOCAL ANSWER CELL
0020  C  'SLMIN' IS THE MINIMUM SLOPE VALUE
0021  C
0022  C  THIS ROUTINE WAS WRITTEN BY GREEN, BUT PATTERNED AFTER
0023  C  A ROUTINE WRITTEN BY EASTMAN. (GRADE)
0024  C
0025  C  ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0026  C  =====
0027  C
0028  C      TEKTRONIX COMMON
0029  C
0030  C      COMMON ITEK (45)
0031  C
0032  C      LOGICAL UNITS AND COMMON LOCATION
0033  C
0034  C      COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0035  C
0036  C      POINTERS
0037  C
0038  C      COMMON EXIT      ,IANM(3),ICL1(2),IGEN(3),IGRW(5)
0039  C      COMMON IOPTN     ,IOVR(7),IFNTR  ,ISOC(6),ISUB(8)
0040  C      COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT  ,LUO
0041  C      COMMON MODE      ,NANM      ,NCLI      ,NGEN      ,NGRW
0042  C      COMMON NOVR      ,NSECTS    ,NSOC      ,NSUB      ,NSUR
0043  C      COMMON NTOP      ,NU        ,NVEG
0044  C
0045  C      GRADING PARAMETERS
0046  C
0047  C      COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCPA(5)
0048  C      COMMON GRODVS(5),HWHT(5,10),HWSLI(5,10),NSPP(5),PCEQ19(4)
0049  C      COMMON PERCNT(5,10),REHCPY(5),REHVOL(5),SLOPE(5,10),WBF
0050  C
0051  C      CATEGORY TEXT
0052  C
0053  C      COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0054  C      COMMON OVRD(11,13),SBSL(13),SDEC(33,13),SWHY(44,13)
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0055      COMMON TPSSL(49,13),VGTA(15,13)
0056 C
0057 C      EXPECTATION VALUES
0058 C
0059      COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0060      COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0061      COMMON TOPSOI(33,6),VEGETA(10,6)
0062 C
0063 C      CATEGORY RESPONSES
0064 C
0065      COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0066      COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0067      COMMON RTOPSO(9),RVEGET(2)
0068 C
0069 C      FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0070 C
0071      COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHM
0072      COMMON CABS(2),CAC,CACP,CADF,CAIH
0073      COMMON CADS,CAEAF,CAHSAP,CAHSTS,CAIF
0074      COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0075      COMMON CSTRP,FAVG(5),PFSTSP,PFAC,ROLTEC(29,34)
0076      COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0077 C
0078      INTEGER EXIT,CLMA,GDES,GWHY,OVRD,SBSL
0079      INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0080      INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0081      INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0082      INTEGER VEGETA,ANIMAL
0083      INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0084      INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0085      INTEGER ROLTEC,TTL
0086 C
0087      INTEGER COMMON (1)
0088      EQUIVALENCE (COMMON (1), ITEK (1))
0089      EQUIVALENCE (IARY (1), LUT)
0090      EQUIVALENCE (IARY2 (1), ISTRK)
0091      EQUIVALENCE (IARY2 (2), ISECT)
0092      EQUIVALENCE (IARY2 (3), ICODE)
0093      EQUIVALENCE (IARY2 (4), LEN)
0094 C
0095      LOGICAL LER
0096 C      DISPLAY TITLE AND ASSIGN MINIMUM SLOPE
0097      EXIT=1
0098      SLMIN=11.
0099      IF(MODE.EQ.4) SLMIN = 0.1
0100 1      IF (LER) CALL ERASE
0101      IF (LER) CALL HOME
0102      WRITE (LUT,1000)
0103 C      FOR EDIT MODE (IOPTN = 2), DISPLAY THE CURRENT DATA
0104      IF ( IOPTN.EQ.1 ) GOTO 30
0105      WRITE (LUT, 1100) (GRIVRS (JJ), JJ = 1, 4), COGO
0106 2 READ (LUT, *) IANS
0107      IF(IANS.EQ.0) GOTO 4
0108      IF (IANS.GE.1.AND.IANS.LE.5)
0109      >GOTO ( 30, 40, 50, 60, 70 ) IANS
0110      WRITE (LUT,1110)

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0111      GOTO 2
0112      4      IF(IOPTN.EQ.3) IOPTN = 1
0113      RETURN
0114      C      USER INPUT -> HEIGHT OF THE SPOIL BANK
0115      30      WRITE (LUT,1030)
0116      READ (LUT,*) GRDVB (1)
0117      IF(IOPTN.NE.1) GOTO 1
0118      IF (GRDVB (1).GE.0.) GOTO 40
0119      EXIT = 0
0120      RETURN
0121      C      USER INPUT -> AVERAGE SLOPE OF THE SPOILS
0122      40      WRITE (LUT,1040)
0123      READ (LUT,*) GRDVB (2)
0124      IF(IOPTN.NE.3) GOTO 41
0125      IF (GRDVB (2).GE.AMAX1 (GRDVB (4),SLMIN).AND.GRDVB (2).LT.90.)
0126      > GOTO 1
0127      WRITE (LUT,1066)
0128      GOTO 40
0129      41      IF (GRDVB (2).LT.90.AND.GRDVB (2).GE.SLMIN)
0130      > GOTO (50,1,1) IOPTN
0131      43      WRITE (LUT,1046) SLMIN
0132      GOTO 40
0133      C      USER INPUT -> LENGTH OF THE SPOIL BANK
0134      50      WRITE (LUT,1050)
0135      52      READ (LUT,*) GRDVB (3)
0136      IF (GRDVB (3).GT.0.) GOTO 55
0137      WRITE (LUT,1055)
0138      GOTO 52
0139      55      IF (IOPTN.NE.1) GOTO 1
0140      C      USER INPUT -> GENERAL SLOPE OF THE AREA
0141      60      WRITE (LUT,1060)
0142      READ (LUT,*) GRDVB (4)
0143      IF (GRDVB (4).LT.GRDVB (2).AND.GRDVB (4).GE.0)
0144      > GOTO (70,1,1) IOPTN
0145      WRITE (LUT,1065)
0146      GOTO 60
0147      C      USER INPUT -> COST OF GRADING OVERBURDEN
0148      70      WRITE (LUT,1070)
0149      72      READ (LUT,*) COGO
0150      IF (COGO .GT. 0.) GOTO 73
0151      WRITE (LUT,1055)
0152      GOTO 72
0153      73      IF (IOPTN.EQ.2) GOTO 1
0154      IOPTN=3
0155      GOTO 1
0156      C      FORMAT STATEMENTS
0157      1000      FORMAT (// "---- DRAGLINE/OPENING CUT ----" //)
0158      C
0159      1100      FORMAT (/,5X "CURRENT VALUES FOR THE DATA ARE :",
0160      &7X "1.) HEIGHT OF THE SPOIL BANK",
0161      & "FEET" /,
0162      &7X "2.) INITIAL AVERAGE SLOPE OF THE SPOIL :",
0163      & "DEGREES" /,
0164      &7X "3.) LENGTH OF THE SPOIL BANK",
0165      & "YARDS" /,
0166      &7X "4.) AVERAGE SLOPE OF THE AREA",

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0167      &"DEGREES"/,
0168      &7X"5.) COST OF GRADING SPOILS                : "F13.2,1X,
0169      &"CENTS/CU YD"///,
0170      &1X"      IF YOU WISH TO CHANGE ANY OF THE ABOVE VALUES, ENTER"/,
0171      &1X"THE NUMBER CORRESPONDING TO THE ITEM YOU WANT TO CHANGE."/,
0172      &1X"      IF NO CHANGES ARE DESIRED, ENTER A ZERO -> _")
0173 C
0174 1110 FORMAT (/,"5X"ERROR--> ILLEGAL CHOICE.RE-SELECT. -> _")
0175 C
0176 1030 FORMAT (/,"HEIGHT OF THE SPOIL BANK (FEET) -> _")
0177 C
0178 1040 FORMAT (/,"INITIAL AVERAGE SLOPE OF THE SPOIL (DEGREES) -> _")
0179 C
0180 1046 FORMAT (/,"2X"ERROR -> SLOPE MUST BE GREATER THAN "F5.2,/
0181      >          2X"          DEGREES AND LESS THAN 90 DEGREES"/)
0182 C
0183 1050 FORMAT (/,"LENGTH OF THE SPOIL BANK (YARDS) -> _")
0184 C
0185 1055 FORMAT(/,"1X"ERROR-> VALUE MUST BE GREATER THAN ZERO -> _")
0186 C
0187 1060 FORMAT (/,"AVERAGE SLOPE OF THE AREA PERPENDICULAR TO",/,
0188      >"THE SPOIL BANK AXIS -> _")
0189 C
0190 1065 FORMAT (/,"***ERROR*** GENERAL SLOPE MUST BE LESS THAN"1X
0191      &"THE INITIAL SLOPE",/,"AND NOT LESS THAN ZERO.*****")
0192 1066 FORMAT(/,"***ERROR*** SLOPE MUST BE GREATER THAN OR"/
0193      &"EQUAL TO THE GENERAL SLOPE (OR 11 DEG), AND LESS THAN 90."/)
0194 C
0195 1070 FORMAT (/,"COST OF GRADING SPOILS (CENTS/CU.YD) -> _")
0196 C
0197      END
0198 END$

```

&DLRLE T=00004 IS ON CR00015 USING 00009 BLKS R=0110

```
0001  FTN4
0002                      SUBROUTINE DLRLE
0003  C          --- DRAGLINE RELATIONSHIP EXECUTIVE ---
0004  C
0005  C LEVEL 3
0006  C
0007  C DLRLE IS ACCESSED BY DLGE TO DRAW GRAPHS OF THE DRAGLINE
0008  C FINAL SLOPE RELATIONSHIPS, OR TO PRINT TABLES OF SAME.
0009  C
0010  C THE CALLING SEQUENCE IS :      CALL DLRLE
0011  C
0012  C SUBROUTINES SCHEDULED BY DLRLE ARE:
0013  C
0014  C      BUILD TO BUILD A TABLE OF VOLUMES,COSTS AND WIDTHS
0015  C      GRAFS TO DRAW GRAPHS OF VOLUMES,COSTS AND WIDTHS
0016  C      DLTDR TO DISPLAY A TABLE OF VOLUMES,COSTS AND WIDTHS
0017  C
0018  C LOCAL VARIABLES ARE:
0019  C
0020  C "IANS" - LOCAL ANSWER CELL
0021  C "LF"   - LOGICAL UNIT OF THE LINE PRINTER
0022  C
0023  C RATHER THAN DECLARE THE ENTIRE CLAIM COMMON BLOCK, THE
0024  C ARRAY "ICOM" IS USED, AND THE COMMON VARIABLES "LUT",
0025  C "LUL", "RGENDE", "LER", AND "IPNTR" EQUIVALENCED TO
0026  C THE APPROPRIATE ICOM ENTRY
0027  C
0028  C DLRLE DECLARES LABEL COMMON TABLE
0029  C
0030  C DLRLE IS SWAPPED IN BY PROGRAM DLRLX
0031  C THIS ROUTINE WAS WRITTEN BY GREEN
0032  C
0033  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0034  C =====
0035  C
0036          COMMON ICOM(6176)
0037          INTEGER RGENDE(3)
0038          LOGICAL LER
0039          EQUIVALENCE (ICOM(81),IPNTR)
0040          EQUIVALENCE (ICOM(56),LER)
0041          EQUIVALENCE (ICOM(58),LUL)
0042          EQUIVALENCE (ICOM(46),LUT)
0043          EQUIVALENCE (ICOM(4944),RGENDE(1))
0044  C
0045  C
0046          COMMON /TABLE/
0047          >          TBLV, TBLT, TBLA, TBLs, JCOUNT,TSMIN,KODE,
0048          >          TSMAX,TVMIN,TVMAX,TAMIN,TAMAX,TTMIN,TTMAX
0049  C
0050          DIMENSION TBLV(12),TBLT(12),TBLA(12),TBLs(12)
0051          DATA LP/6/
0052  C          FIRST, BUILD THE TABLES
0053          KODE=2
0054          CALL BUILD
```



```

0055      GOTO(100,200,300) IPNTR
0056 C      DRAW THE GRAPHS
0057      100 CALL GRAFS
0058      RETURN
0059 C      PRINT THE TABLES
0060      200 WRITE(LUT,201)
0061      201 FORMAT(1X'DISPLAY ON TT OR LP -> _')
0062      READ(LUT,202) IANS
0063      202 FORMAT(A2)
0064      LUL=LUT
0065      IF(IANS,EQ,2HLP) LUL=LP
0066      CALL DLTDI(LUL,LUT,LER,RGENDE(2))
0067 C      SIMPLE ENOUGH. LET'S QUIT
0068      300 RETURN
0069      END
0070 END$

```

&DLRSL T=00004 IS ON CR00015 USING 00006 BLKS R=0095

```
0001  FTN4
0002                                SUBROUTINE DLRSL
0003  C      --- DRAGLINE RECOMMENDED SLOPES AND PERCENTS ---
0004  C
0005  C LEVEL 3
0006  C
0007  C DLRSL IS ACCESSED BY DLGE TO READ THE RECOMMENDED SLOPE/PERCENT
0008  C PAIRS.
0009  C
0010  C THE CALLING SEQUENCE IS :      CALL DLRSL
0011  C
0012  C SUBROUTINES CALLED ARE:
0013  C
0014  C      DLIRM TO READ THE RECOMMENDED SLOPE/PERCENT PAIRS FOR THE
0015  C      MINE RUN OPTION
0016  C      DLIOF TO READ THE RECOMMENDED SLOPE/PERCENT PAIRS FOR THE
0017  C      OPENING AND FINAL CUT OPTIONS
0018  C
0019  C RATHER THAN DECLARE THE ENTIRE CLAIM COMMON BLOCK, THE ARRAY
0020  C ICOM IS USED, AND "EXIT" AND "RGENDE" EQUIVALENCED TO THE
0021  C APPROPRIATE ICOM ENTRY.
0022  C
0023  C DLRSL IS SWAPPED IN BY PROGRAM DLRSX.
0024  C (THIS PROGRAM WAS SEGMENTED IN ANTICIPATION OF
0025  C FURTHER DEVELOPMENTS FOR RECOMMENDED SLOPES)
0026  C
0027  C
0028  C THIS ROUTINE WAS WRITTEN BY GREEN
0029  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0030  C
0031  C =====
0032  C
0033      COMMON ICOM(6176)
0034      INTEGER RGENDE(3)
0035      EQUIVALENCE (ICOM(59),EXIT)
0036      EQUIVALENCE (ICOM(4944),RGENDE(1))
0037  C      SCHEDULE THE APPROPRIATE SUBROUTINE
0038      IF(RGENDE(2).EQ.2) CALL DLIRM
0039      IF(RGENDE(2).NE.2) CALL DLIOF
0040  C      THAT WAS EASY. LET'S QUIT
0041      RETURN
0042      END
0043  END$
```

8DLST T=00004 IS ON CR00015 USING 00042 BLKS R=0217

```
0001 FTN4
0002 SUBROUTINE DLST
0003 C --- DRAGLINE SUMMARY TABLE ---
0004 C
0005 C LEVEL 3
0006 C
0007 C DLST IS ACCESSED BY DLGE TO PRESENT A SUMMARY TABLE OF VOLUMES
0008 C AND COSTS FOR ALL OF THE DRAGLINE CUT OPTIONS.
0009 C
0010 C THE CALLING SEQUENCE IS : CALL DLST
0011 C
0012 C SUBROUTINES SCHEDULED BY DLST ARE :
0013 C
0014 C DLGCO TO COMPUTE THE GRADING COSTS AND VOLUMES FOR THE
0015 C OPENING CUT OPTION
0016 C DLGCM TO COMPUTE THE GRADING COSTS AND VOLUMES FOR THE
0017 C MINE RUN OPTION
0018 C DLGCF TO COMPUTE THE GRADING COSTS AND VOLUMES FOR THE
0019 C FINAL CUT OPTION
0020 C
0021 C DLST USES THE TCS ROUTINES : BELL,ERASE, AND HOME
0022 C AND DECLARES LABEL COMMON ALTRN AND LABEL COMMON TABLE
0023 C
0024 C THE LOCAL VARIABLES ARE:
0025 C
0026 C ACRES - ACRES COVERED BY GRADING TO A SPECIFIC SLOPE/PERCENT
0027 C PAIR (IN ACRES)
0028 C COST - COST OF GRADING FOR A SPECIFIC SLOPE/PERCENT PAIR (IN $)
0029 C CPA - COST PER ACRE OF GRADING FOR A SPECIFIC SLOPE/PERCENT
0030 C PAIR (IN DOLLARS/ACRE)
0031 C IANS - LOCAL ANSWER CELL
0032 C ICHAR - TINPT RETURN CELL
0033 C LP - LOGICAL UNIT OF THE LINE PRINTER
0034 C TACRES - TOTAL ACRES COVERED BY GRADED SPOILS (IN ACRES)
0035 C T CPA - TOTAL COST PER ACRE TO GRADE SPOILS (IN DOLLARS/ACRE)
0036 C TLSB - HYPOTHETICAL TOTAL LENGTH OF THE SPOIL BANK FOR
0037 C THE MINE RUN SPOILS (IN FEET)
0038 C TOTCST - TOTAL COST OF GRADING (DOLLARS)
0039 C TOTVOL - TOTAL VOLUME GRADED (CUBIC YARDS)
0040 C VOL - VOLUME GRADED FOR A SPECIFIC SLOPE/PERCENT PAIR
0041 C (IN CUBIC YARDS)
0042 C WIDTH - WIDTH OF THE FINAL BANK FOR THE OPENING CUT (IN FEET)
0043 C
0044 C
0045 C THIS ROUTINE WAS WRITTEN BY GREEN / EASTMAN
0046 C (PATTERNED AFTER "GRADE" BY EASTMAN)
0047 C
0048 C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0049 C =====
0050 C
0051 C TEKTRONIX COMMON
0052 C
0053 C COMMON ITEK (45)
0054 C
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0055 C      LOGICAL UNITS AND COMMON LOCATION
0056 C
0057      COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0058 C
0059 C      POINTERS
0060 C
0061      COMMON EXIT      ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0062      COMMON IOPTN     ,IOVR(7),IPNTR  ,ISOC(6),ISUB(8)
0063      COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT  ,LUD
0064      COMMON MODE      ,NANM      ,NCLI      ,NGEN      ,NGRW
0065      COMMON NOVR      ,NSECTS    ,NSOC      ,NSUB      ,NSUR
0066      COMMON NTOP      ,NU        ,NVEG
0067 C
0068 C      GRADING PARAMETERS
0069 C
0070      COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCFA(5)
0071      COMMON GRDVB(5),HWHT(5,10),HWSLI(5,10),NSPF(5),PCEQ19(4)
0072      COMMON PERCNT(5,10),REHCFY(5),REHVOL(5),SLOPE(5,10),WBP
0073 C
0074 C      CATEGORY TEXT
0075 C
0076      COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0077      COMMON OVRD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0078      COMMON TPSL(49,13),VGTA(15,13)
0079 C
0080 C      EXPECTATION VALUES
0081 C
0082      COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0083      COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0084      COMMON TOPSOI(33,6),VEGETA(10,6)
0085 C
0086 C      CATEGORY RESPONSES
0087 C
0088      COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0089      COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0090      COMMON RTOPSO(9),RVEGET(2)
0091 C
0092 C      FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0093 C
0094      COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHM
0095      COMMON CABS(2),CAC,CACP,CADF,CADH
0096      COMMON CAUS,CAEAF,CAHSAP,CAHSTS,CAIP
0097      COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0098      COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0099      COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0100 C
0101      INTEGER EXIT,CLMA,GDES,GWHY,OVRD,SBSL
0102      INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0103      INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0104      INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0105      INTEGER VEGETA,ANIMAL
0106      INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0107      INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0108      INTEGER RCLTEC,TTL
0109 C
0110      INTEGER COMMON (1)

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0111      EQUIVALENCE (COMMON (1), ITEX (1))
0112      EQUIVALENCE (IARRY (1), LUT)
0113      EQUIVALENCE (IARY2 (1), ISTRK)
0114      EQUIVALENCE (IARY2 (2), ISECT)
0115      EQUIVALENCE (IARY2 (3), ICODE)
0116      EQUIVALENCE (IARY2 (4), LEN)
0117 C
0118      LOGICAL LER
0119 C
0120 C =====
0121 C
0122      COMMON /ALTRN/ ALTN
0123      INTEGER ALTN(6,4)
0124 C
0125      COMMON /TABLE/
0126      >          TBLV, TBLT, TELA, TBLS, JCOUNT, TSMIN, KODE,
0127      >          TSMAX, TVMIN, TVMAX, TAMIN, TAMAX, TTMIN, TTMAX
0128 C
0129      DIMENSION TBLV(12), TBLT(12), TELA(12), TBLS(12)
0130 C
0131 C          OFFER SUMMARY TABLE SELECTION
0132      1      IF(LER) CALL ERASE
0133              IF(LER) CALL HOME
0134              IF(MODE.EQ.4) GOTO 5
0135      WRITE(LUT,505)
0136      505 FORMAT(1X'SELECT THE SUMMARY TABLE YOU WISH TO VIEW'/
0137      >          1X'0->NONE'/
0138      >          1X'1->CROPLAND'/
0139      >          1X'2->NATIVE VEGETATION'/
0140      >          1X'3->WILDLIFE'/
0141      >          1X'4->WATER RECREATION'/
0142      >          1X'5->HIGH USE'/
0143      >          1X'NOTE: OPTIONS 1 AND 5 NOT AVAILABLE FOR THE'/
0144      >          1X'          OPENING AND FINAL CUT OPTIONS'//
0145      >          1X'ENTER YOUR SELECTION HERE -> _')
0146      504 READ(LUT,*) LUO
0147              IF(LUO.EQ.0) RETURN
0148              IF(RGENDE(2).EQ.2.AND.LUO.GT.0.AND.LUO.LE.5) GOTO 5
0149              IF(RGENDE(2).NE.2.AND.LUO.GE.2.AND.LUO.LE.4) GOTO 5
0150      506 WRITE(LUT,1010)
0151      1010 FORMAT(/5X'ERROR -> ILLEGAL ENTRY. RE-INPUT -> _')
0152      GOTO 504
0153      5      KODE=1
0154              IF(NSPP(LUO).EQ.0) GOTO 506
0155              IF(MODE.EQ.4) LUO=1
0156 C          SET LOGICAL UNIT OF LIST DEVICE
0157      LP=6
0158      TOTVOL=0.
0159      TOTCST=0.
0160      TACRES=0.
0161      IF(MODE.NE.4) GOTO 20
0162      ALTN(1,1)=2H*G
0163      ALTN(1,2)=2HRA
0164      ALTN(1,3)=2HDE
0165      ALTN(1,4)=2H*
0166      20 WRITE(LUT,999)

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0167      999 FORMAT(1X'DISPLAY ON TT OR LP ? -> _')
0168      READ (LUT,1000) IANS
0169      1000 FORMAT(A2)
0170      LUL=LUT
0171      IF(IANS.EQ.2HLP) LUL=LP
0172      IF(LUL.EQ.LUT.AND.LER) CALL ERASE
0173      IF(LUL.EQ.LUT.AND.LER) CALL HOME
0174      IF(LUL.EQ.LP) WRITE(LUL,1001)
0175      1001 FORMAT(1H1)
0176      GOTO (100,200,300) RGENDE(2)
0177 C      OPENING CUT
0178      100 WRITE(LUL,1004) (ALTN(LUD,J),J=1,4)
0179      1004 FORMAT(10X'OPENING CUT - '4A2)
0180      WRITE(LUL,1085)
0181      1085 FORMAT(/,1X
0182      1 '*FINAL * % OF * VOLUME *WIDTH OF *'13X'*'3X'COST'3X'*'/1X
0183      2 '*SLOPE * TOTAL* GRADED *THE FINAL*'4X'COST'5X'*'4X
0184      + '*PER'3X'*'/1X
0185      3 '* (DEGS)*LENGTH*(CU-YDS)*BANK (FT)*'13X'*'3X'ACRE'3X'*')
0186      WRITE(LUL,1086)
0187      1086 FORMAT(1X'*'6X'*'6X'*'8X'*'9X'*'13X'*'10X'*')
0188      WRITE(LUL,1087)
0189      1087 FORMAT(X,59'*')
0190      WRITE(LUL,1086)
0191      DO 110 I=1,NSPP(LUD)
0192      CALL DLGCO(SLOPE(LUD,I),PERCNT(LUD,I),VOL,COST,CPA,GRDVES,
0193      >          COGO,WIDTH)
0194      WRITE(LUL,1088) SLOPE(LUD,I),PERCNT(LUD,I),VOL,WIDTH,COST ,CPA
0195      1088 FORMAT(1X'*'F6.1'*'F6.1'*'F8.2'*'F9.0'*'F13.2'*'F10.2'*')
0196      TOTVOL = TOTVOL + VOL
0197      TOTCST = TOTCST + COST
0198      ACRES = COST/CPA
0199      TACRES = TACRES + ACRES
0200      110 CONTINUE
0201      TCPA = TOTCST/TACRES
0202      WRITE(LUL,1086)
0203      WRITE(LUL,1087)
0204      WRITE(LUL,1086)
0205      WRITE(LUL,1090) TOTVOL, TOTCST ,TCPA
0206      1090 FORMAT(1X'TOTALS:'2X,'100.0',1X,F8.1,10X,'$'F11.2,4X,'$',F7.2//)
0207      WRITE(LUL,1091) TACRES
0208      1091 FORMAT(/,5X'THE TOTAL AREA COVERED BY THE GRADED '/
0209      >          5X'SPOILS IS -> 'F13.1' ACRES.')
0210      GOTO 500
0211 C      MINE RUN
0212      200 WRITE(LUL,2004) (ALTN(LUD,J),J=1,4)
0213      2004 FORMAT(10X'MINE RUN OPTION - '4A2)
0214      WRITE(LUL,2005)
0215      2005 FORMAT(/,1X '* FINAL * PERCENT * VOLUME *
0216      + '* AVERAGE *' /
0217      1 , '* SLOPE * OF TOTAL * MOVED * GRADING *',
0218      + '* COST *' /
0219      2 '* (DEGREES) * AREA * (CU-YDS) * COST *',
0220      + '* PER ACRE *')
0221      WRITE(LUL,2010)
0222      2010 FORMAT(' * '9('"%")' * '10('"%")' * '11('"%")' * '11('"%")' *')

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0223      + ' ***** *')
0224      WRITE(LUL,2020)
0225 2020 FORMAT(' *',11X,'*',12X,'*',13X,'*',13X,'*',12X,'*')
0226      DO 220 I=1,NSPF(LUO)
0227      CALL DLGCM(SLOPE(LUO,I),PERCNT(LUO,I),VOL,COST,TLSE,GRDVBS,COGO)
0228      TOTVOL = TOTVOL + VOL
0229      TOTCST = TOTCST + COST
0230      ACRES = ((TLSE*PERCNT(LUO,I)/100.)*(GRDVBS(1)/3.)) /4840.
0231      CPA = COST/ACRES
0232      WRITE(LUL,2030) SLOPE(LUO,I),PERCNT(LUO,I),VOL,COST,CPA
0233 2030 FORMAT(' *',F4.1,4X,'*',4X,F4.1,3X' *',F10.1,' *$', F11.2,
0234      + ' * $',F9.2,' *')
0235      220 CONTINUE
0236      TCPA = TOTCST / GRDVBS(3)
0237      WRITE(LUL,2020)
0238      WRITE(LUL,2010)
0239      WRITE(LUL,2090) TOTVOL, TOTCST, TCPA
0240 2090 FORMAT(/5X,'TOTALS:',5X,'100.0',6X,F10.1,3X,'$',F11.2,3X,
0241      1 '$',F9.2,5/)
0242      GOTO 500
0243 C          FINAL CUT
0244      300 WRITE(LUL,3004) (ALTN(LUO,J),J=1,4)
0245 3004 FORMAT(10X'FINAL CUT - '4A2)
0246      WRITE(LUL,3005)
0247 3005 FORMAT(/' * FINAL * PERCENT * VOLUME *
0248      + '* AVERAGE */
0249      1 , ' * SLOPE * OF TOTAL * MOVED * GRADING *',
0250      + ' * COST * /
0251      2 ' * (DEGREES) * LENGTH * (CU-YDS) * COST *'
0252      + ' * PER ACRE *')
0253      WRITE(LUL,3010)
0254 3010 FORMAT(' * ' 9('*')' * ' 10('*')' * ' 11('*')' * ' 11('*')' *'
0255      + ' ***** *')
0256      WRITE(LUL,3020)
0257 3020 FORMAT(' *',11X,'*',12X,'*',13X,'*',13X,'*',12X,'*')
0258      DO 310 I=1,NSPF(LUO)
0259      CALL DLGCF(SLOPE(LUO,I),PERCNT(LUO,I),WBP,GRDVBS,COGO,
0260      > VOL,COST,ACRES)
0261      TOTVOL = TOTVOL + VOL
0262      TOTCST = TOTCST + COST
0263      CPA = COST/ACRES
0264      TACRES = TACRES + ACRES
0265      WRITE(LUL,3030) SLOPE(LUO,I),PERCNT(LUO,I),VOL,COST,CPA
0266 3030 FORMAT(' *',F4.1,4X,'*',3X,F5.1,3X' *',F10.1,' *$', F11.2,
0267      + ' * $',F9.2,' *')
0268      310 CONTINUE
0269      TCPA = TOTCST / TACRES
0270      WRITE(LUL,3020)
0271      WRITE(LUL,3010)
0272      WRITE(LUL,3090) TOTVOL, TOTCST, TCPA
0273 3090 FORMAT(/5X,'TOTALS:',5X,'100.0',6X,F10.1,3X,'$',F11.2,3X,
0274      1 '$',F9.2,5/)
0275      WRITE(LUL,1091) TACRES
0276      500 ALTN(1,1)=2HCR
0277      ALTN(1,2)=2HOP
0278      ALTN(1,3)=2HLA

```

```
0279      ALTN(1,4)=2HND
0280      WRITE(LUT,501)
0281      501 FORMAT(//,1X'HIT THE RETURN KEY TO CONTINUE.....')
0282      CALL BELL
0283      CALL TINPT(ICHAR)
0284      IF(MODE.EQ.4) RETURN
0285      GOTO 1
0286      END
0287  END$
```

&DLTDR T=00004 IS ON CR00015 USING 00011 BLKS R=0051

```
0001  FTN4
0002      SUBROUTINE DLTDR(LUL,LUT,LER,ICUT)
0003  C --- DRAGLINE : TABLES OF THE DRAGLINE RELATIONSHIPS ---
0004  C
0005  C LEVEL 4
0006  C
0007  C DLTDR IS ACCESSED BY DLRE TO PRINT THE TABLE OF THE
0008  C DRAGLINE RELATIONSHIPS.
0009  C
0010  C THE CALLING SEQUENCE IS :
0011  C
0012  C      CALL DLTDR (LUL,LUT,LER,ICUT)
0013  C
0014  C WHERE
0015  C
0016  C      LUL IS THE LOGICAL UNIT OF THE LIST DEVICE
0017  C      LUT IS THE LOGICAL UNIT OF THE USER'S TERMINAL
0018  C      LER IS .TRUE. FOR ERASE CAPABILITY
0019  C      ICUT IS THE CUT OPTION
0020  C
0021  C DLTDR USES THE TCS ROUTINES : BELL,ERASE HOME AND TINPT
0022  C AND DECLARES LABEL COMMON TABLE.
0023  C
0024  C THE CLAIM COMMON BLOCK IS NOT DECLARED.
0025  C
0026  C "ICHR" IS THE TINPT RETURN CELL
0027  C "LP" IS THE LOGICAL UNIT OF THE LINE PRINTER
0028  C
0029  C THIS ROUTINE WAS WRITTEN BY GREEN/EASTMAN
0030  C
0031  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0032  C
0033  C
0034      COMMON ITEK(45)
0035      COMMON /TABLE/
0036      >          TBLV, TBLT, TBLA, TBLs, JCOUNT,TSMIN,KODE,
0037      >          TSMAX,TVMIN,TVMAX,TAMIN,TAMAX,TTMIN,TTMAX
0038  C
0039      LOGICAL LER
0040  C
0041      DIMENSION TBLV(12),TBLT(12),TBLA(12),TBLs(12)
0042  C
0043      DATA LP/6/
0044  C
0045      IF(LUL.EQ.LUT.AND.LER) CALL ERASE
0046      IF(LUL.EQ.LUT.AND.LER) CALL HOME
0047      IF(LUL.EQ.LP) WRITE(LUL,999)
0048      IF(ICUT.EQ.1) WRITE(LUL,1000)
0049      IF(ICUT.EQ.2) WRITE(LUL,1001)
0050      IF(ICUT.EQ.3) WRITE(LUL,1002)
0051      IF(ICUT.NE.1) WRITE(LUL,1003)
0052      IF(ICUT.EQ.1) WRITE(LUL,1008)
0053      WRITE(LUL,1004)
0054      WRITE(LUL,1005)
```



```

0055      DO 10 K=1,JCOUNT
0056      10 WRITE(LUL,1006) TELS(K),TELV(K),TELT(K),TBLA(K)
0057      WRITE(LUL,1004)
0058      WRITE(LUL,1005)
0059      IF(LUL.NE.LUT.OR..NOT.LER) RETURN
0060      WRITE(LUL,1007)
0061      CALL BELL
0062      CALL TINPT(1CHAR)
0063      CALL ERASE
0064      CALL HOME
0065      RETURN
0066      999 FORMAT(1H1)
0067      1000 FORMAT(10X"OPENING CUT OPTION")
0068      1001 FORMAT(10X"MINE RUN OPTION")
0069      1002 FORMAT(10X"FINAL CUT OPTION")
0070      1003 FORMAT(// " * FINAL * VOLUME * TOTAL * AVERAGE * "
0071      1 /," * SLOPE * MOVED * GRADING * COST PER *"/,
0072      2 " * (DEGREES) * (CU-YDS) * COST * ACRE *")
0073      1008 FORMAT(// " * FINAL * VOLUME * TOTAL * WIDTH * "
0074      1 /," * SLOPE * MOVED * GRADING * OF THE *"/,
0075      2 " * (DEGREES) * (CU-YDS) * COST * FINAL BANK *")
0076      1004 FORMAT(" * " 9(" *")" * " 10(" *")" * " 11(" *")" * " 10(" *")" *")
0077      1005 FORMAT(" *",11X,"*",12X,"*",13X,"*",12X,"*")
0078      1006 FORMAT(" * ",F4.1,4X,"*",1X,F10.1," * $",F10.2," * $",F9.2," *")
0079      1007 FORMAT(/1X"HIT RETURN TO CONTINUE.....")
0080      END
0081      END$

```

```

0001  FTN4
0002                      SUBROUTINE DSPLA
0003  C
0004  C LEVEL 5
0005  C
0006  C DSPLA IS ACCESSED BY GRAFS TO DISPLAY THE CURRENT INITIAL DATA
0007  C
0008  C THE CALLING SEQUENCE IS :      CALL DSPLA
0009  C
0010  C DSPLA USES THE TCS ROUTINES : HOME,BELL, AND TINPT
0011  C
0012  C "ICHAR" IS THE TINPT RETURN CELL
0013  C
0014  C THIS ROUTINE WAS WRITTEN BY EASTMAN/GREEN
0015  C
0016  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0017  C =====
0018  C      TEKTRONIX COMMON
0019  C
0020      COMMON ITEK (45)
0021  C
0022  C      LOGICAL UNITS AND COMMON LOCATION
0023  C
0024      COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0025  C
0026  C      POINTERS
0027  C
0028      COMMON EXIT      ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0029      COMMON IOPTN     ,IOVR(7),IPNTR  ,ISOC(6),ISUB(8)
0030      COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT  ,LUO
0031      COMMON MODE      ,NAMM      ,NCLI      ,NGEN      ,NGRW
0032      COMMON NOVR      ,NSECTS    ,NSOC      ,NSUB      ,NSUR
0033      COMMON NTOP      ,NU        ,NVEG
0034  C
0035  C      GRADING PARAMETERS
0036  C
0037      COMMON AREA(5),BENLEN(5,10),BENNI(5,10),COGO,GCPA(5)
0038      COMMON GROVBS(5),HWHT(5,10),HWSLI(5,10),NSPP(5),PCEQ19(4)
0039      COMMON PERCNT(5,10),REHCPY(5),REHVOL(5),SLOPE(5,10),WBP
0040  C
0041  C      CATEGORY TEXT
0042  C
0043      COMMON ANIM(23,13),CLMA(13,13),GDIES(15,13),GWHY(22,13)
0044      COMMON OVBD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0045      COMMON TPFL(49,13),VGTA(15,13)
0046  C
0047  C      EXPECTATION VALUES
0048  C
0049      COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0050      COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0051      COMMON TOPSOI(33,6),VEGETA(10,6)
0052  C
0053  C      CATEGORY RESPONSES
0054  C

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0055      COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0056      COMMON ROVRBD(7,10),RSDCEC(6),RSUBSO(8),RSURHY(6)
0057      COMMON RTOPSO(9),RVEGET(2)
0058  C
0059  C      FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0060  C
0061      COMMON CAAHM,CABAH,CABFN(3),CABFF(3),CABHM
0062      COMMON CABS(2),CAC,CACP,CADF,CAIH
0063      COMMON CADS,CAEAF,CAHSAF,CAHSTS,CAIP
0064      COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0065      COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0066      COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0067  C
0068      INTEGER EXIT,CLMA,GDES,GWHY,OVRBD,SBSL
0069      INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0070      INTEGER CLIMAT,GENDES,GRNHYD,OVRBDN
0071      INTEGER SDECN,SUBSOI,SURHYD,TOPSOI
0072      INTEGER VEGETA,ANIMAL
0073      INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSDCEC
0074      INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0075      INTEGER RCLTEC,TTL
0076  C
0077      INTEGER COMMON (1)
0078      EQUIVALENCE (COMMON (1), ITEK (1))
0079      EQUIVALENCE (IARY (1), LUT)
0080      EQUIVALENCE (IARY2 (1), ISTRK)
0081      EQUIVALENCE (IARY2 (2), ISECT)
0082      EQUIVALENCE (IARY2 (3), ICODE)
0083      EQUIVALENCE (IARY2 (4), LEN)
0084  C
0085      LOGICAL LER
0086  C
0087  C =====
0088      CALL HOME
0089      LUD = IARY(3)
0090  C      BRANCH TO CUT OPTION
0091      GOTO(100,200,300) RGENDE(2)
0092  C      OPENING CUT
0093      100 WRITE(LUD,1010) (GRDVS(K),K=1,4),COGO
0094      1010 FORMAT(/"DRAGLINE - OPENING CUT"/
0095      +/"CURRENT INPUT DATA:"//
0096      1 "SPOIL BANK HEIGHT  : "F7.2" FT."/
0097      2 "INITIAL SPOIL SLOPE: "F7.2" DEG"/
0098      3 "SPOIL BANK LENGTH  : "F7.2" FT."/
0099      4 "SLOPE OF THE AREA   : "F7.2" DEG"/
0100      5 "COST OF GRADING    : "F5.2" C/C-Y")
0101      GOTO 500
0102  C      MINE RUN
0103      200 WRITE(LUD,2010) (GRDVS(K),K=1,4),COGO
0104      2010 FORMAT(5X"** DRAGLINE - MINE RUN **"//
0105      2 2X"CURRENT INPUT DATA:"//
0106      3 "DIST. BETWEEN SPOIL PEAKS : "F7.2" FT"/
0107      4 "INITIAL SPOIL BANK SLOPE  : "F7.2" DG"/
0108      5 "AREA COVERED BY SPOILS    : "F7.2" AC"/,
0109      6 "GENERAL SLOPE OF THE AREA : "F7.2" DG"/,
0110      5 "COST OF GRADING OVERBURDEN: "F5.2" C/CY")

```



```

0111      GOTO 500
0112  C      FINAL CUT
0113      300 WRITE(LUD,3010) WBP,GRDUES,COGO
0114      3010 FORMAT(5X"*** DRAGLINE - FINAL CUT ***"/
0115      1      /5X" CURRENT INPUT DATA :"/
0116      31X"PIT BOTTOM WIDTH   : " F7.2" FT"/
0117      41X"PIT LENGTH         : " F7.2" YD"/
0118      51X"HIGHWALL HEIGHT    : " F7.2" FT"/
0119      81X"SPOIL BANK HEIGHT  : " F7.2" FT"/
0120      B1X"HIGHWALL SLOPE     : " F7.2" DEG"/
0121      C1X"SPOIL BANK SLOPE   : " F7.2" DEG"/
0122      D1X"GRADING COST      : " F5.2" C/CY")
0123  C      DONE. LET USER INSPECT THE SCREEN
0124      500 IF(LUD .EQ. LUT) WRITE(LUT,501)
0125      501 FORMAT(1X"HIT RETURN TO CONTINUE...")
0126      IF(LUD .EQ. LUT) CALL BELL
0127      IF(LUD .EQ. LUT) CALL TINPT(ICHAR)
0128      IF(LUD .EQ. LUT) CALL ERASE
0129      IF(LUD .EQ. LUT) CALL HOME
0130      RETURN
0131      END
0132  END$

```

&DVN T=00004 IS ON CR00015 USING 00030 BLKS R=0000

```
0001 FTN4
0002 C ===== SUBROUTINE DVN =====
0003 C =
0004 C = DRAW VECTOR NUMBERS
0005 C =
0006 C = SOURCE FILE : &DVN OBJECT FILE : &DVN
0007 C =====
0008 C
0009 C
0010 C DESCRIPTION:
0011 C
0012 C THIS ROUTINE DRAWS "VECTOR" NUMBERS ORIENTATED IN ANY OF
0013 C THE FOUR CARDINAL DIRECTIONS, DRAWN CLOCKWISE.
0014 C
0015 C CALLING SEQUENCE:
0016 C
0017 C CALL DVN (VALUE,ISC,IOC,NDF)
0018 C
0019 C ARGUMENTS:
0020 C
0021 C VALUE -> NUMBER TO BE DRAWN
0022 C ISC -> ACTUAL SIZE OF CHARACTER WILL BE ISC * 3 RASTER UNITS
0023 C IOC -> ORIENTATION CODE:
0024 C 1 -> BASE LINE ON BOTTOM
0025 C 2 -> BASE LINE OF LEFT
0026 C 3 -> BASE LINE ON RIGHT
0027 C 4 -> BASE LINE ON TOP
0028 C NDF -> NUMBER OF DECIMAL PLACES (ACCURATE TO 3)
0029 C
0030 C ACCESSED BY:
0031 C
0032 C TSIFG, TSXBA, TSXFS
0033 C
0034 C SUBROUTINES SCHEDULED:
0035 C
0036 C DRWRL (TCS)
0037 C MOVRL (TCS)
0038 C
0039 C LOCAL VARIABLES:
0040 C
0041 C ICFX -> COMMAND TABLE FOR X COORDINATE
0042 C ICFY -> COMMAND TABLE FOR Y COORDINATES
0043 C IDXCH -> INDEX TO CHARACTER
0044 C INCR -> INCREMENT ADDED TO TEST CHARACTER LENGTH
0045 C IPTR -> LOCAL POINTER
0046 C IX -> ICFX ENTRIES DEFINED BY IOC
0047 C IY -> ICFY ENTRIES DEFINED BY IOC
0048 C NVN -> NUMBER OF VECTOR NUMBERS TO BE DRAWN (>"ONE'S")
0049 C NVN1 -> NUMBER OF VECTOR NUMBERS TO BE DRAWN (<= "ONES")
0050 C VAL -> SET TO VALUE FOR LOCAL MANIPULATIONS
0051 C
0052 C AUTHOR: ORVILLE D. GREEN
0053 C
0054 C LAST REVISION: AUGUST 15, 1979
```

```

0055 C
0056 C
0057 C =====
0058 C
0059 SUBROUTINE DVN (VALUE,ISC,IOC,NDF)
0060 COMMON ITEK (45)
0061 INTEGER IDXCH (7), IPTR (10),
0062 - ICFX (10,8), ICFY (10,8), IX (10,8), IY (10,8)
0063 C
0064 DATA ICFX / 0, 3, 0, 0, 2, 0, 0, 0, 1, 0,
0065 - 3,-3, 1, 1, 0, 0, 0, 3, 0, 3,
0066 - 0, 0, 0, 0,-2, 1, 3,-3,-1, 0,
0067 - -3, 0, 2, 0, 3, 0, 0, 0, 0, 0,
0068 - 0, 0, 0, 2,-3, 2,-2, 0, 3,-1,
0069 - 0, 0,-3, 0, 0, 0, 0, 0, 0, 0,
0070 - 0, 0, 0,-3, 0,-3,-1, 0,-2,-2,
0071 - 0, 0, 0, 0, 0, 0, 0, 0,-1, 0/
0072 C
0073 DATA ICFY / 3, 0, 3, 3, 0, 3, 3, 3, 0, 3,
0074 - 0, 1, 0, 0, 3,-3,-3, 0, 3, 0,
0075 - -3, 0,-3,-3, 0, 0, 0, 1, 0,-3,
0076 - 0, 0, 0, 3, 0, 3, 3, 0,-3, 3,
0077 - 4, 0, 3, 0, 1, 0, 0, 0, 0, 0,
0078 - 0, 0, 1,-3, 0,-3,-3, 0, 3,-3,
0079 - 0, 0, 0, 4, 0, 4, 4, 0, 0, 0,
0080 - 0, 0, 0, 0, 0, 0, 0, 0, 1, 4/
0081 C
0082 DATA IPTR / 5, 2, 6, 7, 5, 7, 7, 3, 8, 8 /
0083 C
0084 C Initialize local variables and test for "ones" place :
0085 NVN = 0
0086 INCR = 0
0087 NVN1 = 0
0088 VAL = VALUE
0089 IF ( VAL .LT. 10 ) 10, 30
0090 C Test VAL for decimals only :
0091 10 IF ( VAL .LT. 1. ) 15, 25
0092 C Decimals only - set IDXCH array for NDF > 0 :
0093 15 IF ( NDF .LE. 0 ) RETURN
0094 INCR = 2
0095 IDXCH (1) = 0
0096 IDXCH (2) = -1
0097 VAL = VALUE * 10. + 0.0005
0098 NVN1 = 2
0099 C DECIMAL NUMBERS
0100 20 NVN1 = NVN1 + 1
0101 IDXCH ( NVN1 ) = IFIX ( VAL )
0102 VAL = ( VAL - FLOAT ( IDXCH ( NVN1 ) ) ) * 10.
0103 IF ( NVN1 .EQ. NVN + NDF + INCR ) 900, 20
0104 C Set "ones" place in IDXCH array ** Test NVN size **
0105 C Set decimal point for NDF > 0 :
0106 25 IF ( NVN .EQ. 0 ) NVN = NVN + 1
0107 VAL = VAL + .0005
0108 IDXCH ( NVN ) = IFIX ( VAL )
0109 IF ( NDF .LE. 0 ) GOTO 900
0110 NVN = NVN + 1

```



```

0111         IF ( NVN .GT. 7 ) GOTO 9010
0112         IDXCH ( NVN ) = -1
0113 C Test size - Set NVN1 and VAL for (NVN + NDP) < 15 :
0114         IF ( NVN + NDP .GT. 7 ) GOTO 9010
0115         NVN1 = NVN
0116         VAL = ( VAL - FLOAT ( IDXCH ( NVN - 1 ) ) ) * 10.
0117         GOTO 20
0118 C WHOLE NUMBERS
0119         30 NVN = NVN + 1
0120         IF ( NVN .GT. 7 ) GOTO 9010
0121 C Test VAL for "ones" place
0122         IF ( VAL .LT. 10 ) GOTO 25
0123         DO 40 IL = 1, 12
0124         VAL = VAL / 10.
0125         IF ( VAL .LT. 10. ) 45, 40
0126         40 CONTINUE
0127         GOTO 9010
0128 C Set IDXCH array and fix VAL
0129         45 IDXCH ( NVN ) = IFIX ( VAL )
0130         VAL = VAL - FLOAT ( IDXCH ( NVN ) )
0131         DO 60 IL1 = 1, IL
0132         VAL = VAL * 10.
0133         IF ( VAL .LT. 1. ) 50, 60
0134         50 IF ( IL1 .EQ. IL ) GOTO 60
0135         NVN = NVN + 1
0136         IF ( NVN .GT. 7 ) GOTO 9010
0137         IDXCH ( NVN ) = 0
0138         60 CONTINUE
0139         GOTO 30
0140 C
0141 C*****
0142 C SET NVN
0143         900 IF ( NVN1 .GT. 0 ) NVN = NVN1
0144 C TEST ORIENTATION CODE :
0145         GOTO (920, 940, 960, 980 ) 100
0146 C BASE LINE ON BOTTOM :
0147         920 DO 930 I = 1, 10
0148             DO 930 J = 1, 8
0149                 IX ( I, J ) = ICFY ( I, J )
0150             930 IY ( I, J ) = -ICFX ( I, J )
0151             GOTO 1000
0152 C BASE LINE ON LEFT
0153         940 DO 950 I = 1, 10
0154             DO 950 J = 1, 8
0155                 IX ( I, J ) = -ICFX ( I, J )
0156             950 IY ( I, J ) = -ICFY ( I, J )
0157             GOTO 1000
0158 C BASE LINE ON RIGHT
0159         960 DO 970 I = 1, 10
0160             DO 970 J = 1, 8
0161                 IX ( I, J ) = ICFX ( I, J )
0162             970 IY ( I, J ) = ICFY ( I, J )
0163             GOTO 1000
0164 C BASE LINE ON TOP ( WHO NEEDS IT ? )
0165         980 DO 990 I = 1, 10
0166             DO 990 J = 1, 8

```

```

0167      IX ( I, J ) = -ICFY ( I, J )
0168      990 IY ( I, J ) = + ICFX ( I, J )
0169      GOTO 1000
0170 C DRAW VECTOR NUMBER
0171      1000 IF ( IOC .EQ. 1 ) CALL MOVRL ( ISC, ISC )
0172      IF ( IOC .EQ. 2 ) CALL MOVRL ( ISC, - ISC )
0173      IF ( IOC .EQ. 3 ) CALL MOVRL ( - ISC, ISC )
0174      IF ( IOC .EQ. 4 ) CALL MOVRL ( -ISC, - ISC )
0175      DO 2000 I = 1, NVN
0176      IF ( IDXCH (I) .EQ. -1 ) GOTO 1800
0177      DO 1500 J = 1, IPTR ( IDXCH (I) + 1 ) - 1
0178      1500 CALL DRWRL ( IX( IDXCH (I) + 1 , J ) * ISC ,
0179      + IY( IDXCH (I) + 1 , J ) * ISC )
0180 C POSITION FOR NEXT DRAW
0181      CALL MOVRL (IX(IDXCH(I)+1,IPTR(IDXCH(I)+1)) * ISC,
0182      + IY(IDXCH(I)+1,IPTR(IDXCH(I)+1))* ISC)
0183      GOTO 2000
0184 C DRAW DECIMAL POINT
0185      1800 IF ( IOC .EQ. 1 ) CALL MOVRL (ISC, -3 * ISC )
0186      IF ( IOC .EQ. 2 ) CALL MOVRL (-3 * ISC, -ISC )
0187      IF ( IOC .EQ. 3 ) CALL MOVRL (3 * ISC, ISC )
0188      IF ( IOC .EQ. 4 ) CALL MOVRL (-ISC, 3 * ISC )
0189      CALL DRWRL (0,2)
0190      CALL MOVRL (-1,-1)
0191      CALL DRWRL (2,0)
0192      CALL MOVRL (-1,-1)
0193      IF ( IOC .EQ. 1 ) CALL MOVRL ( 2 * ISC, 3 * ISC )
0194      IF ( IOC .EQ. 2 ) CALL MOVRL ( 3 * ISC, -2 * ISC )
0195      IF ( IOC .EQ. 3 ) CALL MOVRL ( -3 * ISC, 2 * ISC )
0196      IF ( IOC .EQ. 4 ) CALL MOVRL (-2 * ISC,-3 * ISC )
0197      2000 CONTINUE
0198 C REPOSITION
0199      IF ( IOC .EQ. 1 ) CALL MOVRL (ISC,-ISC)
0200      IF ( IOC .EQ. 2 ) CALL MOVRL (-ISC,-ISC)
0201      IF ( IOC .EQ. 3 ) CALL MOVRL (ISC,ISC)
0202      IF ( IOC .EQ. 4 ) CALL MOVRL (-ISC, ISC)
0203      RETURN .
0204 C OUT OF RANGE VALUE
0205      9010 WRITE (6, 9011)
0206      9011 FORMAT ( 1X" *** DVN ROUTINE *** --> VALUE OUT OF RANGE. ")
0207      RETURN
0208      END
0209      END$

```

&EIAD T=00004 IS ON CRO0015 USING 00020 BLKS R=0000

```
0001  FTN4
0002                      SUBROUTINE EIAD
0003  C                      ENVIRONMENTAL INPUT - ABBREVIATED DISPLAY
0004  C
0005  C LEVEL 1
0006  C
0007  C      EXECUTIVE FOR ENVIRONMENTAL INPUT USING ABBREVIATED DISPLAY
0008  C EIAD IS ACCESSED BY CLAIM AND SWAPPED IN BY PROGRAM EIADX
0009  C
0010  C THE CALLING SEQUENCE IS :    CALL EIAD
0011  C
0012  C SUBROUTINES SCHEDULED:
0013  C
0014  C      CAT2  (CLAIM)
0015  C      CAT3  (CLAIM)
0016  C      CAT4  (CLAIM)
0017  C      CAT5  (CLAIM)
0018  C      CAT6  (CLAIM)
0019  C      CAT7  (CLAIM)
0020  C      CAT8  (CLAIM)
0021  C      CAT9  (CLAIM)
0022  C      CAT10 (CLAIM)
0023  C      ERASE (ITEK)
0024  C      HOME  (ITEK)
0025  C
0026  C THIS ROUTINE WAS WRITTEN BY GREEN
0027  C
0028  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0029  C
0030  C =====
0031  C
0032  C
0033  C      TEKTRONIX COMMON
0034  C
0035  C      COMMON ITEK (45)
0036  C
0037  C      LOGICAL UNITS AND COMMON LOCATION
0038  C
0039  C      COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0040  C
0041  C      POINTERS
0042  C
0043  C      COMMON EXIT      ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0044  C      COMMON IOPTN     ,IOVR(7),IPNTR  ,ISOC(6),ISUB(8)
0045  C      COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT  ,LUO
0046  C      COMMON MODE      ,NANM      ,NCLI      ,NGEN      ,NGRW
0047  C      COMMON NOVR      ,NSECTS    ,NSOC      ,NSUB      ,NSUR
0048  C      COMMON NTOP      ,NU        ,NVEG
0049  C
0050  C      GRADING PARAMETERS
0051  C
0052  C      COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,SCPA(5)
0053  C      COMMON GRODVS(5),HWHT(5,10),HWSLI(5,10),NSPF(5),PCEQ19(4)
0054  C      COMMON PERCNT(5,10),REHCPY(5),REHVOL(5),SLOPE(5,10),WBF
```



```

0055 C
0056 C CATEGORY TEXT
0057 C
0058 COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0059 COMMON OVRD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0060 COMMON TPSL(49,13),VGTA(15,13)
0061 C
0062 C EXPECTATION VALUES
0063 C
0064 COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0065 COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0066 COMMON TOPSOI(33,6),VEGETA(10,6)
0067 C
0068 C CATEGORY RESPONSES
0069 C
0070 COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0071 COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0072 COMMON RTOPSO(9),RVEGET(2)
0073 C
0074 C FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0075 C
0076 COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHN
0077 COMMON CABS(2),CAC,CACF,CALF,CADH
0078 COMMON CADS,CAEAF,CAHSAF,CAHSTS,CAIP
0079 COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0080 COMMON CSTRF,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0081 COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0082 C
0083 INTEGER EXIT,CLMA,GDES,GWHY,OVRD,SBSL
0084 INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0085 INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0086 INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0087 INTEGER VEGETA,ANIMAL
0088 INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0089 INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0090 INTEGER RCLTEC,TTL
0091 C
0092 INTEGER COMMON (1)
0093 EQUIVALENCE (COMMON (1), ITEK (1))
0094 EQUIVALENCE (IARY (1), LUT)
0095 EQUIVALENCE (IARY2 (1), ISTRK)
0096 EQUIVALENCE (IARY2 (2), ISECT)
0097 EQUIVALENCE (IARY2 (3), ICODE)
0098 EQUIVALENCE (IARY2 (4), LEN)
0099 C
0100 LOGICAL LER
0101 C
0102 IF (LER) CALL ERASE
0103 IF (LER) CALL HOME
0104 GOTO(100,200,300,400,500,600,700,800,900) EXIT-1
0105 C
0106 100 CALL CAT2
0107 IF (EXIT.EQ.0) RETURN
0108 LEXIT = 1
0109 IF (LER) CALL ERASE
0110 IF (LER) CALL HOME

```

```

0111 C
0112 200 CALL CAT3
0113 IF ( EXIT .EQ. 0 ) RETURN
0114 LEXIT = 1
0115 IF (LER) CALL ERASE
0116 IF (LER) CALL HOME
0117 C
0118 300 CALL CAT4
0119 IF ( EXIT .EQ. 0 ) RETURN
0120 LEXIT = 1
0121 IF (LER) CALL ERASE
0122 IF (LER) CALL HOME
0123 C
0124 400 IF(LEXIT.EQ.1) NU=0
0125 CALL CAT5
0126 IF ( EXIT .EQ. 0 ) RETURN
0127 LEXIT = 1
0128 IF (LER) CALL ERASE
0129 IF (LER) CALL HOME
0130 C
0131 500 CALL CAT6
0132 IF ( EXIT .EQ. 0 ) RETURN
0133 LEXIT = 1
0134 IF (LER) CALL ERASE
0135 IF (LER) CALL HOME
0136 C
0137 600 CALL CAT7
0138 IF ( EXIT .EQ. 0 ) RETURN
0139 LEXIT = 1
0140 IF (LER) CALL ERASE
0141 IF (LER) CALL HOME
0142 C
0143 700 CALL CAT8
0144 IF ( EXIT .EQ. 0 ) RETURN
0145 LEXIT = 1
0146 IF (LER) CALL ERASE
0147 IF (LER) CALL HOME
0148 C
0149 800 CALL CAT9
0150 IF ( EXIT .EQ. 0 ) RETURN
0151 LEXIT = 1
0152 IF (LER) CALL ERASE
0153 IF (LER) CALL HOME
0154 C
0155 900 CALL CAT10
0156 RETURN
0157 END
0158 END$

```

8EIFD T=00004 IS ON CR00015 USING 00030 BLKS R=0000

```
0001  FTN4
0002                SUBROUTINE EIFD
0003  C                ENVIRONMENTAL INPUT - FULL DISPLAY  (EXECUTIVE)
0004  C
0005  C LEVEL 1
0006  C
0007  C EIFD IS SCHEDULED BY CLAIM AND SWAPPED IN BY PROGRAM EIFDX
0008  C
0009  C THE CALLING SEQUENCE IS :    CALL EIFD
0010  C
0011  C SUBROUTINES SCHEDULED ARE :
0012  C
0013  C     ANIMA (CLAIM)
0014  C     CLIMA (CLAIM)
0015  C     ERASE (ITEK)
0016  C     GRWHY (CLAIM)
0017  C     HOME  (ITEK)
0018  C     OVRBD (CLAIM)
0019  C     SOCEC (CLAIM)
0020  C     SUBSD (CLAIM)
0021  C     SURHY (CLAIM)
0022  C     TOPSD (CLAIM)
0023  C     VEGET (CLAIM)
0024  C
0025  C THIS ROUTINE WAS WRITTEN BY GREEN
0026  C
0027  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0028  C
0029  C =====
0030  C
0031  C     TEKTRONIX COMMON
0032  C
0033  C     COMMON ITEK (45)
0034  C
0035  C     LOGICAL UNITS AND COMMON LOCATION
0036  C
0037  C     COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0038  C
0039  C     POINTERS
0040  C
0041  C     COMMON EXIT    ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0042  C     COMMON IOPTN   ,IOVR(7),IPNTR  ,ISOC(6),ISUB(8)
0043  C     COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT  ,LUO
0044  C     COMMON MODE    ,NANM    ,NCLI    ,NGEN    ,NGRW
0045  C     COMMON NOVR    ,NSECTS  ,NSOC    ,NSUB    ,NSUR
0046  C     COMMON NTOP    ,NU      ,NVEG
0047  C
0048  C     GRADING PARAMETERS
0049  C
0050  C     COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCFA(5)
0051  C     COMMON GROVES(5),HWHT(5,10),HWSLI(5,10),NSPP(5),PCEQ19(4)
0052  C     COMMON PERCNT(5,10),REHCPY(5),REHVOL(5),SLOPE(5,10),WBP
0053  C
0054  C     CATEGORY TEXT
```



```

0055 C
0056 COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0057 COMMON OVBD(11,13),SESL(13),SCEC(33,13),SWHY(44,13)
0058 COMMON TPSL(49,13),VGTA(15,13)
0059 C
0060 C EXPECTATION VALUES
0061 C
0062 COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0063 COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0064 COMMON TOPSOI(33,6),VEGETA(10,6)
0065 C
0066 C CATEGORY RESPONSES
0067 C
0068 COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0069 COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0070 COMMON RTOPSO(9),RVEGET(2)
0071 C
0072 C FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0073 C
0074 COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHM
0075 COMMON CABS(2),CAC,CACP,CADF,CADH
0076 COMMON CAUS,CAEAF,CAHSAF,CAHSTS,CAIF
0077 COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0078 COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0079 COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0080 C
0081 INTEGER EXIT,CLMA,GDES,GWHY,OVBD,SESL
0082 INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0083 INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0084 INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0085 INTEGER VEGETA,ANIMAL
0086 INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0087 INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0088 INTEGER RCLTEC,TTL
0089 C
0090 INTEGER COMMON (1)
0091 EQUIVALENCE (COMMON (1), ITEK (1))
0092 EQUIVALENCE (IARY (1), LUT)
0093 EQUIVALENCE (IARY2 (1), ISTRK)
0094 EQUIVALENCE (IARY2 (2), ISECT)
0095 EQUIVALENCE (IARY2 (3), ICODE)
0096 EQUIVALENCE (IARY2 (4), LEN)
0097 C
0098 LOGICAL LER
0099 C
0100 C -----
0101 C USER INPUT -> EDIT CATEGORY
0102 C -----
0103 C
0104 IF (MODE .EQ. 1) GOTO 20
0105 10 IF (LER) CALL ERASE
0106 IF (LER) CALL HOME
0107 WRITE (LUT, 1000)
0108 15 READ (LUT, *) EXIT
0109 IF (EXIT .EQ. 0) RETURN
0110 IF (EXIT .GE. 1 .AND. EXIT .LE. 9) GOTO 20

```

```

0111      WRITE (LUT, 1100)
0112      GOTO 15
0113      20 IF(MODE.EQ.1) EXIT=EXIT-1
0114      GOTO (100,200,300,400,500,600,700,800,900) EXIT
0115      C
0116      C -----
0117      C      CLIMATOLOGY
0118      C -----
0119      C
0120      100 CALL CLIMA
0121      IF (EXIT .EQ. 0) RETURN
0122      IF (MODE .GT. 1) GOTO 10
0123      LEXIT = 1
0124      C
0125      C -----
0126      C      TOPSOIL
0127      C -----
0128      C
0129      200 CALL TOPSO
0130      IF (EXIT .EQ. 0) RETURN
0131      IF (MODE .GT. 1) GOTO 10
0132      LEXIT = 1
0133      C
0134      C -----
0135      C      SUBSOIL
0136      C -----
0137      C
0138      300 CALL SUBSO
0139      IF (EXIT .EQ. 0) RETURN
0140      IF (MODE .GT. 1) GOTO 10
0141      LEXIT = 1
0142      C
0143      C -----
0144      C      OVERBURDEN
0145      C -----
0146      C
0147      400 IF(LEXIT.EQ.1.AND.MODE.EQ.1) NU=0
0148      CALL OVRBD
0149      IF (EXIT .EQ. 0) RETURN
0150      IF (MODE .GT. 1) GOTO 10
0151      LEXIT = 1
0152      C
0153      C -----
0154      C      SURFACE WATER HYDROLOGY
0155      C -----
0156      C
0157      500 CALL SURHY
0158      IF (EXIT .EQ. 0) RETURN
0159      IF (MODE .GT. 1) GOTO 10
0160      LEXIT = 1
0161      C
0162      C -----
0163      C      GROUND WATER HYDROLOGY
0164      C -----
0165      C
0166      600 CALL GRWHY

```

```

0167      IF (EXIT .EQ. 0) RETURN
0168      IF (MODE .GT. 1) GOTO 10
0169      LEXIT = 1
0170      C
0171      C -----
0172      C      VEGETATION
0173      C -----
0174      C
0175      700 CALL VEGET
0176      IF (EXIT .EQ. 0) RETURN
0177      IF (MODE .GT. 1) GOTO 10
0178      LEXIT = 1
0179      C
0180      C -----
0181      C      ANIMALS
0182      C -----
0183      C
0184      800 CALL ANIMA
0185      IF (EXIT .EQ. 0) RETURN
0186      IF (MODE .GT. 1) GOTO 10
0187      LEXIT = 1
0188      C
0189      C -----
0190      C      SOCIO - ECONOMICS
0191      C -----
0192      C
0193      900 CALL SOCEC
0194      IF (MODE .GT. 1) GOTO 10
0195      RETURN
0196      C
0197      C -----
0198      C      FORMAT STATEMENTS
0199      C -----
0200      C
0201      1000 FORMAT (5X'*** EDIT MODE ***'/
0202      >          5X'-----'//
0203      >          5X'0 -> EXIT'//
0204      >          5X'1 -> CLIMATOLOGY'//
0205      >          5X'2 -> TOPSOIL'//
0206      >          5X'3 -> SUBSOIL'//
0207      >          5X'4 -> OVERBURDEN'//
0208      >          5X'5 -> SURFACE WATER HYDROLOGY'//
0209      >          5X'6 -> GROUND WATER HYDROLOGY'//
0210      >          5X'7 -> VEGETATION'//
0211      >          5X'8 -> ANIMALS'//
0212      >          5X'9 -> SOCIO - ECONOMICS'//
0213      >          5X'ENTER EDIT CATEGORY -> _')
0214      C
0215      1100 FORMAT (5X'?? ** ERROR ** RE-INPUT -> _')
0216      END
0217      END$

```



```

0001  FTN4
0002      SUBROUTINE FEASI
0003  C
0004  C-----ENVIRONMENTAL FEASIBILITY RANKINGS
0005  C FEASI IS CALLED BY PROGRAM CLAIM TO DETERMINE THE
0006  C ENVIRONMENTAL FEASIBILITY RANKINGS FOR THE FIVE STANDARD
0007  C LAND USE ALTERNATIVES AND THE "OTHER" CATEGORY. THE
0008  C RANKINGS ARE FOUND BY AVERAGING THE EXPECTATION OF
0009  C SUCCESS VALUES ASSOCIATED WITH EACH RESPONSE. EACH
0010  C RESPONSE CARRIES EQUAL WEIGHT, EXCEPT FOR THE OVERBURDEN
0011  C RESPONSES , WHICH ARE WEIGHTED ACCORDING TO THE THICKNESS
0012  C OF THE LITHOLOGIC UNITS. THE APPROPRIATE LAND USE ALTERNATIVE
0013  C IS "FLAGGED" AND A SPECIAL MESSAGE DISPLAYED WHEN A
0014  C SUITABLE ENVIRONMENTAL RESPONSE IS ENCOUNTERED. THESE
0015  C MESSAGES DEAL WITH THE "MANDATORY" OR "FORBIDDEN" LAND USE
0016  C ALTERNATIVES AS DESCRIBED IN THE CLAIM USER'S DATABOOK. THE
0017  C LAND USE RANKINGS ARE DISPLAYED IN DECREASING ORDER - FROM
0018  C "MOST" FEASIBLE TO "LEAST" FEASIBLE.
0019  C
0020  C SUBROUTINE FEASI IS SWAPPED IN BY PROGRAM FEASX
0021  C
0022  C THE CALLING SEQUENCE IS :      CALL FEASI
0023  C
0024  C ALL DATA REQUIRED BY FEASI IS PASSED THROUGH THE COMMON BLOCK.
0025  C NO USER INPUTS ARE REQUIRED.
0026  C LABEL COMMON ALTRN MUST BE DECLARED.
0027  C
0028  C FEASI CALLS THE HP REVISED, PLOT 10 (TCS) ROUTINES :
0029  C BELL, ERASE, HOME , TINPT.
0030  C
0031  C THE POINTER "IPNTR" IS USED SUCH THAT IF 1, THE FEASIBILITY
0032  C RANKINGS ARE OUTPUT TO THE LIST DEVICE (LUL, SET
0033  C IN CLAIM), OR IF 3, THE RANKINGS ARE DETERMINED BUT NOT
0034  C PRESENTED (FOR THE OPUSE RUN)
0035  C
0036  C PRINCIPAL VARIABLES :
0037  C
0038  C CMFA IS THE CURRENT MAXIMUM FEASIBILITY AVERAGE
0039  C RFAVG IS THE RANKED FEASIBILITY AVERAGES
0040  C IADD IS THE ADDITION TO THE "I" INDEX IN EACH EXPECTATION ARRAY
0041  C KCEV IS THE CUMULATIVE EXPECTATION VALUES (ALL BUT OVERBURDEN)
0042  C KFLAG IS SET TO "BLANK" FOR NO FLAG - AND "**" FOR FLAGS
0043  C OAVG IS THE OVERBURDEN AVERAGES
0044  C TOC IS THE TOTAL OVERBURDEN CONTRIBUTION
0045  C TOTALX IS THE TOTAL OF ALL EXPECTATION VALUES
0046  C TOTHK IS THE TOTAL OVERBURDEN THICKNESS.
0047  C
0048  C THIS ROUTINE WAS WRITTEN BY EASTMAN AND LATER MODIFIED BY GREEN
0049  C
0050  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0051  C
0052  C =====
0053  C
0054  C      TEKTRONIX COMMON

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```

0055 C
0056 COMMON ITEK (45)
0057 C
0058 C LOGICAL UNITS AND COMMON LOCATION
0059 C
0060 COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0061 C
0062 C POINTERS
0063 C
0064 COMMON EXIT ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0065 COMMON IOPTN ,IOVR(7),IPNTR ,ISOC(6),ISUB(8)
0066 COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT ,LUO
0067 COMMON MODE ,NANM ,NCLI ,NGEN ,NGRW
0068 COMMON NOVR ,NSECTS ,NSOC ,NSUB ,NSUR
0069 COMMON NTOP ,NU ,NVEG
0070 C
0071 C GRADING PARAMETERS
0072 C
0073 COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCFA(5)
0074 COMMON GROVBS(5),HWHT(5,10),HWSLI(5,10),NSPF(5),PCEQ19(4)
0075 COMMON PERCNT(5,10),REHCPY(5),REHVOL(5),SLOPE(5,10),WBP
0076 C
0077 C CATEGORY TEXT
0078 C
0079 COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0080 COMMON OVRBD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0081 COMMON TPSSL(49,13),VGTA(15,13)
0082 C
0083 C EXPECTATION VALUES
0084 C
0085 COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0086 COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0087 COMMON TOPSOI(33,6),VEGETA(10,6)
0088 C
0089 C CATEGORY RESPONSES
0090 C
0091 COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0092 COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0093 COMMON RTOPSO(9),RVEGET(2)
0094 C
0095 C FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0096 C
0097 COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHM
0098 COMMON CABS(2),CAC,CACP,CADF,CADH
0099 COMMON CAIS,CAEAF,CAHSAF,CAHSTS,CAIP
0100 COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0101 COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0102 COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0103 C
0104 INTEGER EXIT,CLMA,GDES,GWHY,OVRBD,SBSL
0105 INTEGER SCEC,SWHY,TPSSL,VGTA,ANIM
0106 INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0107 INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0108 INTEGER VEGETA,ANIMAL
0109 INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0110 INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA

```



```

0111      INTEGER RCLTEC,TTL
0112 C
0113      INTEGER COMMON (1)
0114      EQUIVALENCE (COMMON (1), ITEK (1))
0115      EQUIVALENCE (IARRY (1), LUT)
0116      EQUIVALENCE (IARY2 (1), ISTRK)
0117      EQUIVALENCE (IARY2 (2), ISECT)
0118      EQUIVALENCE (IARY2 (3), ICODE)
0119      EQUIVALENCE (IARY2 (4), LEN)
0120 C
0121      LOGICAL LER
0122 C
0123 C =====
0124 C
0125      COMMON /ALTRN/ ALTN
0126      INTEGER ALTN(6,4)
0127 C
0128      DIMENSION OAVG(10),TOC(10),RFAVG(6),KCEV(6),TOTALX(6),KFLAG(2)
0129      DATA KCEV/0,0,0,0,0,0/, KFLAG/2H ,2H**/
0130 C---START WITH CROPLAND AND PROCEED THROUGH THE "OTHER" CATEGORY
0131      DO 500 LUO=1,6
0132      TOTALX(LUO)=0.
0133 C-----GENERAL DESCRIPTION
0134      IADD=0
0135      DO 20 JJ=1,NGEN
0136      KCEV(LUO) = KCEV(LUO) + GENDES(RGENDE(JJ)+IADD,LUO)
0137      IADD = IADD + IGEN(JJ)
0138      20 CONTINUE
0139 C-----CLIMATOLOGY
0140      IADD=0
0141      DO 30 JJ=1,NCLI
0142      KCEV(LUO) = KCEV(LUO) + CLIMAT(RCLIMA(JJ)+IADD,LUO)
0143      IADD = IADD + ICLI(JJ)
0144      30 CONTINUE
0145 C-----TOPSOIL
0146      IADD = 0
0147      DO 40 JJ=1,NTOP
0148      KCEV(LUO) = KCEV(LUO) + TOPSOI(RTOPSO(JJ)+IADD,LUO)
0149      IADD = IADD + ITOP(JJ)
0150      40 CONTINUE
0151 C-----SUBSOIL
0152      IADD = 0
0153      DO 50 JJ=1,NSUB
0154      KCEV(LUO) = KCEV(LUO) + SUBSOI(RSUBSO(JJ)+IADD,LUO)
0155      IADD = IADD + ISUB(JJ)
0156      50 CONTINUE
0157 C-----OVERBURDEN
0158      IADD = 0
0159      TOTTHK = 0.
0160      TOC (LUO) = 0.
0161      DO 70 I = 1, NOVR
0162      OAVG (I) = 0.
0163      70 TOTTHK = TOTTHK + THICK (I)
0164      DO 80 II = 1, NOVR
0165      DO 75 JJ = 1, NU
0166      75 OAVG(II)=OAVG(II)+(OVRBDN(OVRBD(I,II)+IADD,LUO)*THICK(JJ))

```



```

0167      OAVG (II) = OAVG (II) / TOTTHK
0168      TOC (LUO) = TOC (LUO) + OAVG (II)
0169      80 IADD = IADD + IOVR (II)
0170 C-----SURFACE WATER HYDROLOGY
0171      IADD = 0
0172      DO 90 JJ=1,NSUR
0173      KCEV(LUO) = KCEV(LUO) + SURHYD(RSURHY(JJ)+IADD,LUO)
0174      IADD = IADD + ISUR(JJ)
0175      90 CONTINUE
0176 C-----GROUND WATER HYDROLOGY
0177      IADD = 0
0178      DO 100 JJ=1,NGRW
0179      KCEV(LUO) = KCEV(LUO) + GRWHYD(RGRWHY(JJ)+IADD,LUO)
0180      IADD = IADD + IGRW(JJ)
0181      100 CONTINUE
0182 C-----VEGETATION
0183      IADD = 0
0184      DO 110 JJ=1,NVEG
0185      KCEV(LUO) = KCEV(LUO) + VEGETA(RVEGET(JJ)+IADD,LUO)
0186      IADD = IADD + IVEG(JJ)
0187      110 CONTINUE
0188 C-----ANIMAL
0189      IADD = 0
0190      DO 120 JJ=1,NANM
0191      KCEV(LUO) = KCEV(LUO) + ANIMAL(RANIMA(JJ)+IADD,LUO)
0192      IADD = IADD + IANM(JJ)
0193      120 CONTINUE
0194 C-----SOCIO-ECONOMICS
0195      IADD = 0
0196      DO 130 JJ=1,NSOC
0197      KCEV(LUO) = KCEV(LUO) + SOCECN(RSOCEC(JJ)+IADD,LUO)
0198      IADD = IADD + ISOC(JJ)
0199      130 CONTINUE
0200 C-----
0201      500 CONTINUE
0202 C-----COMPUTE THE AVERAGES FROM TOTALS
0203      DO 510 I=1,6
0204      TOTALX(I) = FLOAT(KCEV(I)) + TOC (I)
0205      510 RFAVG(I) = TOTALX(I) / (NGEN + NCLI + NTOP + NSUB + NOVR +
0206      &NSUR + NGRW + NVEG + NANM + NSOC )
0207 C-----STORE THE UNRANKED FEASIBILITY AVERAGES IN THE COMMON BLOCK
0208      DO 520 I=1,5
0209      520 FAVG(I) = RFAVG(I)
0210 C-----NOW ARRANGE AND PRINT OUT THE AVERAGES IN DESCENDING ORDER :
0211 C-----IPNTR=3 MEANS THAT WE'RE DONE
0212      IF(IPNTR.EQ.3) RETURN
0213      IF(LEP.AND.LUL.EQ.LUT) CALL ERASE
0214      IF(LEP.AND.LUL.EQ.LUT) CALL HOME
0215      J=1
0216      WRITE(LUL,1000) TTL
0217      550 IMAX=1
0218 C-----FIND THE MAXIMUM FEASIBILITY AVERAGE
0219      CMFA=AMAX1(RFAVG(1),RFAVG(2),RFAVG(3),RFAVG(4),RFAVG(5),RFAVG(
0220      560 IF(RFAVG(IMAX).EQ.CMFA) GOTO 570
0221      IMAX=IMAX+1
0222      GOTO 560

```

```

0223 C-----BRANCH TO THE APPROPRIATE SEGMENT FOR FLAG CHECKS
0224     570 IJ=1
0225         GOTO(600,610,620,630,640,650) IMAX
0226 C-----CROPLAND FLAGS:
0227 C-----GENERAL SLOPE OF 10 RANDOM POINTS > 5.7 DEGREES
0228 C-----SALINITY OF TOPSOIL > 16 MMHOS/CM
0229 C-----PRIME AGRICULTURAL LAND
0230     600 IF(RGENDE(3).EQ.3.OR.RTOPSO(6).EQ.5
0231         &.OR.RSOCEC(2).EQ.1) IJ=2
0232         WRITE(LUL,2100) J,(ALTN(IMAX,K),K=1,4),CMFA,KFLAG(IJ)
0233         GOTO 670
0234 C-----VEGETATION FLAGS
0235 C-----ENDANGERED PLANT SPECIES PRESENT
0236     610 IF(RVEGET(1).EQ.5) IJ=2
0237         WRITE(LUL,2100) J,(ALTN(IMAX,K),K=1,4),CMFA,KFLAG(IJ)
0238         GOTO 670
0239 C-----WILDLIFE FLAGS
0240 C-----ENDANGERED ANIMAL SPECIES PRESENT
0241     620 IF(RANIMA(1).EQ.5) IJ=2
0242         WRITE(LUL,2100) J,(ALTN(IMAX,K),K=1,4),CMFA,KFLAG(IJ)
0243         GOTO 670
0244 C-----WATER RECREATION - NO FLAGS AT PRESENT
0245     630 WRITE(LUL,2100) J,(ALTN(IMAX,K),K=1,4),CMFA,KFLAG(IJ)
0246         GOTO 670
0247 C-----HIGH USE FLAGS
0248 C-----ALLUVIUM PRESENT
0249     640 IF(RGRWHY(5).EQ.1) IJ=2
0250         WRITE(LUL,2100) J,(ALTN(IMAX,K),K=1,4),CMFA,KFLAG(IJ)
0251         GOTO 670
0252 C-----OTHER CATEGORY - NO FLAGS
0253     650 WRITE(LUL,2100) J,(ALTN(IMAX,K),K=1,4),CMFA,KFLAG(IJ)
0254 C-----SET THE CURRENT FEASIBILITY MAXIMUM TO -1
0255 C-----AND GET THE NEXT HIGHEST RANKING
0256     670 RFAVG(IMAX) = -1.
0257         J=J+1
0258         IF(J.LE.6) GOTO 550
0259     700 WRITE(LUL,2700)
0260 C-----
0261     1000 FORMAT('1',1X,40A2, '//,15X'FEASIBILITY INDEXES FOR THE CURRENT '
0262         + 'DATA'/15X,40(' '))
0263     2100 FORMAT(17X,11,' ' ,4A2,16X,F6.3,1X,A2)
0264     2700 FORMAT(3/,1X,70(' '=')//)
0265 C-----
0266 C-----EXPLAIN FLAGS :
0267 C-----AVERAGE SLOPE EXCEEDS 5.7 DEGREES ?
0268     IF(RGENDE(3).NE.3) GOTO 710
0269     WRITE(LUL,3000)
0270     3000 FORMAT(/,3X'** YOUR RESPONSE TO :"/,
0271         &5X'I.) GENERAL DESCRIPTION"/,
0272         &5X'C.) AVERAGE SLOPE OF 10 RANDOM POINTS IN THE AREA"/,
0273         &5X' WAS---> 3.) 5.71 - 11.50 DEGREES."/,
0274         &5X'THIS GENERAL SLOPE EXCEEDS THE MAXIMUM REQUIRED BY THIS"/,
0275         &5X'MODEL FOR THE CROPLAND RECLAMATION ALTERNATIVE."/)
0276 C-----TOPSOIL SALINITY EXCEEDS 16 MMHOS/CM ?
0277     710 IF(RTOPSO(6).NE.5) GOTO 720
0278     WRITE(LUL,3100)

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0279 3100 FORMAT(/,5X** YOUR RESPONSE TO :"/,
0280      &5X"III.) TOPSOIL"/,
0281      &5X" F.) SALINITY"/,
0282      &5X" WAS--> 5.) 16.1 + MMHOS/CM."/)
0283      WRITE(LUL,3150)
0284 3150 FORMAT(5X"PRESENT ENVIRONMENTAL AND/OR LEGAL CONSTRAINTS"1X
0285      &"PREVENT RECLAIMING"/,5X"TO THIS LAND USE OPTION"1X
0286      &"UNLESS SPECIFIC REMEDIAL ACTIONS ARE TAKEN."///)
0287 C-----PRIME AGRICULTURAL LAND?
0288      720 IF(RSOCEC(2).NE.1) GOTO 730
0289      WRITE(LUL,3200)
0290 3200 FORMAT(3X** YOUR RESPONSE TO :"/,
0291      &5X"X.) SOCIO-ECONOMICS"/,
0292      &5X"B.) PRIMARY PRESENT LAND USE"/,
0293      &5X" WAS ---> 1.) PRIME AGRICULTURAL LAND."/)
0294      WRITE(LUL,3250)
0295 3250 FORMAT(5X"PRESENT LAWS INDICATE THAT YOU MUST"1X
0296      &"RECLAIM THE LAND TO THIS OPTION"/,5X
0297      &"REGARDLESS OF THE FEASIBILITY RANKING."///)
0298 C-----ENDANGERED PLANT SPECIES ?
0299      730 IF(RVEGET(1).NE.5) GOTO 740
0300      WRITE(LUL,3300)
0301 3300 FORMAT(3X** YOUR RESPONSE TO :"/,
0302      &5X"VIII) NATIVE VEGETATION"/,
0303      &5X" A) CURRENT BROAD PLANT COMMUNITY TYPE PRESENT"/,
0304      &5X" WAS --> THREATENED OR ENDANGERED PLANT SPECIES PRESENT"/)
0305      WRITE(LUL,3250)
0306 C-----ENDANGERED ANIMAL SPECIES ?
0307      740 IF(RANIMA(1).NE.5) GOTO 750
0308      WRITE(LUL,3400)
0309 3400 FORMAT(3X** YOUR RESPONSE TO :"/,
0310      &5X"IX) ANIMALS"/,
0311      &5X" A) CURRENT ABUNDANT WILDLIFE TYPES PRESENT"/,
0312      &5X" WAS --> 5.) PRESENCE OF THREATENED OR ENDANGERED"1X
0313      &"SPECIES"/)
0314      WRITE(LUL,3250)
0315 C-----ALLUVIUM PRESENT ?
0316      750 IF(RGRWHY(5).NE.1) GOTO 755
0317      WRITE(LUL,3500)
0318 3500 FORMAT(3X** YOUR RESPONSE TO :"/,
0319      &5X"VII) GROUND WATER HYDROLOGY"/,
0320      &5X" E) ALLUVIAL VALLEY FLOOR"/,
0321      &5X" WAS --> 1.) PRESENT."/)
0322      WRITE(LUL,3150)
0323 C-----IF THE LIST DEVICE IS THE LINE PRINTER, OR THE USER'S
0324 C-----TERMINAL DOES NOT HAVE ERASE CAPABILITY, WE'RE DONE.
0325 C-----OTHERWISE, ALLOW THE USER TO VIEW THE TABLE BEFORE
0326 C-----RETURNING.
0327      755 IF(LUL.NE.LUT.OR..NOT.LER) RETURN
0328      WRITE(LUT,3510)
0329 3510 FORMAT("HIT THE RETURN KEY TO CONTINUE :_")
0330      CALL BELL
0331      CALL TINPT(IANS)
0332      CALL ERASE
0333      CALL HOME
0334      RETURN

```



0335

END

0336 END\$

&FIXLN T=00004 IS ON CRO0015 USING 00009 BLKS R=0053

```
0001  FTN4
0002      SUBROUTINE FIXLN (SLOPE,PERCNT,NSPP,KPAIR,LINE)
0003  C
0004  C LEVEL 5
0005  C
0006  C FIXLN IS ACCESSED BY DLDGS TO FIX THE LINE OF OUTPUT
0007  C FOR THE SLOPE/PERCENT TABLE.
0008  C
0009  C THE CALLING SEQUENCE IS:
0010  C
0011  C      CALL FIXLN (SLOPE,PERCNT,KPAIR,LINE)
0012  C
0013  C WHERE
0014  C
0015  C      SLOPE IS THE FINAL SLOPE ARRAY
0016  C      PERCNT IS THE FINAL PERCENT ARRAY
0017  C      NSPP IS THE NUMBER OF SLOPE/PERCENT PAIRS ARRAY
0018  C      KPAIR IS THE CURRENT SLOPE/PERCENT PAIR NUMBER
0019  C      LINE IS THE OUTPUT LINE
0020  C
0021  C SUBROUTINE CNVRT IS CALLED TO CONVERT THE REAL NUMBERS
0022  C CONTAINED IN "SLOPE" AND "PERCNT" TO CHARACTER REPRESENTATIONS
0023  C OF THOSE NUMBERS
0024  C
0025  C "INDEX" CONTAINS THE STARTING CELLS FOR THE ENTRIES
0026  C "KVALUE" IS THE CHARACTER REPRESENTATION OF THE VALUE.
0027  C
0028  C THIS ROUTINE WAS WRITTEN BY GREEN
0029  C
0030  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0031  C
0032      INTEGER INDEX(5),NSPP(5)
0033      INTEGER LINE(74),KVALUE(6)
0034      DIMENSION SLOPE(5,10),PERCNT(5,10)
0035      DATA INDEX/1,16,31,46,61/
0036  C
0037  C      FIRST,FILL THE LINE WITH BLANKS
0038      DO 10 K = 1, 74
0039          LINE(K) = 1H
0040      10 CONTINUE
0041  C      NOW, PUT DASHES IN THE APPROPRIATE CELLS
0042      DO 15 K = 8,68,15
0043          LINE(K) = 1H-
0044      15 CONTINUE
0045  C      LOOP THROUGH THE SLOPE/PERCENT VALUES.
0046  C      AND SET THE APPROPRIATE "LINE" CELLS
0047  C      TO THE RETURNED (FROM CNVRT) "KVALUE"
0048  C      STRING.
0049  C      (WE DON'T DO ANYTHING IF NSPP IS USED UP)
0050      DO 30 K=1, 5
0051          IF(NSPP(K).LT.KPAIR) GOTO 30
0052          CALL CNVRT (SLOPE(K,KPAIR),KVALUE)
0053          DO 25 I=1,6
0054              LINE(INDEX(K)+I-1)=KVALUE(I)
```

```
0055      25      CONTINUE
0056          CALL CNVRT (PERCNT(K,KPAIR),KVALUE)
0057          DO 27 I=1,6
0058              LINE(INDEX(K)+I+7)=KVALUE(I)
0059      27      CONTINUE
0060      30 CONTINUE
0061          RETURN
0062          END
0063  END$
```



&FIXSP T=00004 IS ON CR00015 USING 00027 BLKS R=0235

```
0001  FTN4
0002                      SUBROUTINE FIXSP
0003  C          --- FIX SLOPES AND PERCENTS ---
0004  C
0005  C LEVEL 4
0006  C
0007  C FIXSP IS ACCESSED BY DLDCS TO "FIX" THE SLOPE/PERCENT PAIRS.
0008  C
0009  C THE "FIX" CONSISTS THE THE FIVE PHASES:
0010  C     1. MAKE SURE THAT FINAL SLOPES DO NOT EXCEED THE INITIAL SLOPES
0011  C     2. MAKE SURE THAT CROPLAND IS A VALID ALTERNATIVE
0012  C     3. MAKE SURE THAT THE FINAL SLOPE IS NOT LESS THAN THE
0013  C        GENERAL SLOPE.
0014  C     4. COMBINE PERCENTAGES OF ADJACENT EQUAL SLOPES
0015  C     5. GET RID OF EMBEDDED ZERO SLOPE/PERCENT PAIRS.
0016  C
0017  C THE CALLING SEQUENCE IS:      CALL FIXSP
0018  C
0019  C THIS ROUTINE WAS WRITTEN BY GREEN
0020  C
0021  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0022  C
0023  C
0024  C     TEKTRONIX COMMON
0025  C
0026  C     COMMON ITEK (45)
0027  C
0028  C     LOGICAL UNITS AND COMMON LOCATION
0029  C
0030  C     COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0031  C
0032  C     POINTERS
0033  C
0034  C     COMMON EXIT      ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0035  C     COMMON IOPTN    ,IOVR(7),IPNTR ,ISOC(6),ISUB(8)
0036  C     COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT ,LUO
0037  C     COMMON MODE     ,NANM ,NCLI ,NGEN ,NGRW
0038  C     COMMON NOVR     ,NSECTS ,NSOC ,NSUB ,NSUR
0039  C     COMMON NTOP     ,NU ,NVEG
0040  C
0041  C     GRADING PARAMETERS
0042  C
0043  C     COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCFA(5)
0044  C     COMMON GRDVBS(5),HWHT(5,10),HWSLI(5,10),NSPP(5),PCEQ19(4)
0045  C     COMMON PERCNT(5,10),REHCFY(5),REHVOL(5),SLOPE(5,10),WRF
0046  C
0047  C     CATEGORY TEXT
0048  C
0049  C     COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0050  C     COMMON OVED(11,13),SBSL(13), SCEC(33,13),SWHY(44,13)
0051  C     COMMON TPSL(49,13),VGTA(15,13)
0052  C
0053  C     EXPECTATION VALUES
0054  C
```

```

0055      COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0056      COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0057      COMMON TOPSOI(33,6),VEGETA(10,6)
0058      C
0059      C      CATEGORY RESPONSES
0060      C
0061      COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0062      COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0063      COMMON RTOPSO(9),RVEGET(2)
0064      C
0065      C      FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0066      C
0067      COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHM
0068      COMMON CABS(2),CAC,CACF,CADF,CADH
0069      COMMON CADS,CAEAF,CAHSAF,CAHSTS,CAIP
0070      COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0071      COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0072      COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0073      C
0074      INTEGER EXIT,CLMA,GDES,GWHY,OVRBD,SBSL
0075      INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0076      INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0077      INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0078      INTEGER VEGETA,ANIMAL
0079      INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0080      INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0081      INTEGER RCLTEC,TTL
0082      C
0083      INTEGER COMMON (1)
0084      EQUIVALENCE (COMMON (1), ITEX (1))
0085      EQUIVALENCE (IARRY (1), LUT)
0086      EQUIVALENCE (IARY2 (1), ISTRK)
0087      EQUIVALENCE (IARY2 (2), ISECT)
0088      EQUIVALENCE (IARY2 (3), ICODE)
0089      EQUIVALENCE (IARY2 (4), LEN)
0090      C
0091      LOGICAL LER
0092      C
0093      C =====
0094      C      MAKE SURE WE HAVEN'T EXCEEDED THE INITIAL SLOPE ON ANY
0095      C      OF OUR FINAL SLOPES
0096      DO 9 K=1,5
0097      IF(NSPP(K).EQ.0) GOTO 9
0098      DO 6 I=1,NSPP(K)
0099      IF(RGENDE(2).EQ.3) GOTO 7
0100      IF(SLOPE(K,1).GT.GRDVBS(2)) SLOPE(K,I)=GRDVBS(2)
0101      GOTO 6
0102      7 IF(SLOPE(K,I).GT.AMIN1(GRDVBS(4),GRDVBS(5)))
0103      >SLOPE(K,I)=AMIN1(GRDVBS(4),GRDVBS(5))
0104      6 CONTINUE
0105      9 CONTINUE
0106      C      MAKE SURE THAT CROPLAND IS AVAILABLE.
0107      IF(GRDVBS(4).LE.5.7.OR.NSPP(1).EQ.0) GOTO 8
0108      DO 16 K=1,NSPP(1)
0109      SLOPE(1,K)=0.
0110      16 PERCNT(1,K)=0.

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```

0111      NSPF(1)=0
0112 C      MAKE SURE THAT WE'RE NOT GRADING LESS THAN THE
0113 C      GENERAL SLOPE OF THE AREA
0114      8      IF(RGENDE(2).EQ.3) GOTO 19
0115      DO 21 K=1,5
0116          IF(NSPF(K).EQ.0) GOTO 21
0117      DO 22 I=1,NSPF(K)
0118          IF(SLOPE(K,I).GE.GRDVBS(4)) GOTO 22
0119      SLOPE(K,I)=GRDVBS(4)
0120      22 CONTINUE
0121      21 CONTINUE
0122 C      COMBINE PERCENTAGES OF EQUAL SLOPES
0123 C      THAT MAY HAVE BEEN DUPLICATED ABOVE
0124      19 DO 13 K=1,5
0125          ISUBT=0
0126          IF(NSPF(K).LE.1) GOTO 13
0127      DO 12 I=NSPF(K),2,-1
0128          IF(SLOPE(K,I).NE.SLOPE(K,I-1)) GOTO 12
0129      PERCNT(K,I-1)=PERCNT(K,I-1)+PERCNT(K,I)
0130      SLOPE(K,I)=0.
0131      PERCNT(K,I)=0.
0132      ISUBT=ISUBT+1
0133      12 CONTINUE
0134      NSPF(K)=NSPF(K)+ISUBT
0135      13 CONTINUE
0136 C      GET RID OF EMBEDDED ZERO SLOPE/PERCENT PAIRS
0137      DO 24 K=1,5
0138          IF(NSPF(K).LE.1) GOTO 24
0139      DO 26 I=1,NSPF(K)
0140          IF(SLOPE(K,I).GT.0.) GOTO 26
0141      DO 27 J=I,NSPF(K)-1
0142          SLOPE(K,J)=SLOPE(K,J+1)
0143          PERCNT(K,J)=PERCNT(K,J+1)
0144          PERCNT(K,J+1)=0.
0145      27 SLOPE(K,J+1)=0.
0146      26 CONTINUE
0147      24 CONTINUE
0148      RETURN
0149      END
0150 END$

```



2GDE T=00004 IS ON CR00015 USING 00037 BLKS R=0000

```
0001 FTN4
0002          SUBROUTINE GDE
0003 C      --- GENERAL DESCRIPTION EXECUTIVE ---
0004 C
0005 C LEVEL 1
0006 C
0007 C GDE IS ACCESSED BY CLAIM TO SCHEDULE INPUTS AND EDITS
0008 C TO CATEGORY I.
0009 C
0010 C THE CALLING SEQUENCE IS:      CALL GDE
0011 C
0012 C GDE SCHEDULES THE SUBROUTINES :
0013 C
0014 C      DLOID  TO INPUT/EDIT OPENING CUT INITIAL DATA
0015 C      DLMID  TO INPUT/EDIT MINE RUN INITIAL DATA
0016 C      DLFID  TO INPUT/EDIT FINAL CUT INITIAL DATA
0017 C      DLGE   TO GRADE DRAGLINE SPOILS
0018 C      TSGE   TO GRADE TRUCK AND SHOVEL SPOILS
0019 C      TSST   TO UPDATE TRUCK AND SHOVEL DATA
0020 C
0021 C GDE USES THE TCS ROUTINES : ERASE AND HOME
0022 C
0023 C LOCAL VARIABLES ARE :
0024 C
0025 C 'ANS'  - ANSWER CELL
0026 C 'IANS' - ANSWER CELL
0027 C 'ISTAGE' - PRE-EDIT MINE STAGE
0028 C 'ITYPE' - PRE-EDIT MINE TYPE
0029 C
0030 C GDE IS SWAPPED IN BY PROGRAM GDEX
0031 C
0032 C THIS ROUTINE WAS WRITTEN BY GREEN
0033 C THIS ROUTINE WAS MODIFIED BY M. D. SCOTT ON 6 AUG. 1980.
0034 C
0035 C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0036 C =====
0037 C
0038 C      TEKTRONIX COMMON
0039 C
0040 C      COMMON ITEK (45)
0041 C
0042 C      LOGICAL UNITS AND COMMON LOCATION
0043 C
0044 C      COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0045 C
0046 C      POINTERS
0047 C
0048 C      COMMON EXIT      ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0049 C      COMMON IOPTN     ,IOVR(7),IPNIR  ,ISOC(6),ISUB(8)
0050 C      COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT ,LUD
0051 C      COMMON MODE      ,NANM      ,NCLI      ,NGEN      ,NGRW
0052 C      COMMON NOVR      ,NSECTS    ,NSOC      ,NSUB      ,NSUR
0053 C      COMMON NTOP      ,NU        ,NVEG
0054 C
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0055 C      GRADING PARAMETERS
0056 C
0057      COMMON AREA(5), BENLEN(5,10), BENWI(5,10), COGO, GCFA(5)
0058      COMMON GROUERS(5), HWHT(5,10), HWSLI(5,10), NSFP(5), PCER19(4)
0059      COMMON PERCNT(5,10), REHCPY(5), REHVOL(5), SLOPE(5,10), WBF
0060 C
0061 C      CATEGORY TEXT
0062 C
0063      COMMON ANIM(23,13), CLMA(13,13), GDES(15,13), GWHY(22,13)
0064      COMMON OVRD(11,13), SBSL(13), SCEC(33,13), SWHY(44,13)
0065      COMMON TPSL(49,13), VGTA(15,13)
0066 C
0067 C      EXPECTATION VALUES
0068 C
0069      COMMON ANIMAL(13,6), CLIMAT(8,6), GENDES(8,6), GRWHYD(19,6)
0070      COMMON OVRBDN(28,6), SOCECN(29,6), SUBSOI(30,6), SURHYD(23,6)
0071      COMMON TOPSOI(33,6), VEGETA(10,6)
0072 C
0073 C      CATEGORY RESPONSES
0074 C
0075      COMMON RANIMA(3), RCLIMA(2), RGENDE(3), RGRWHY(5)
0076      COMMON ROVRBD(7,10), RSOCEC(6), RSUBSO(8), RSURHY(6)
0077      COMMON RTOPSO(9), RVEGET(2)
0078 C
0079 C      FEASI, TECON, OPUSE SUBSYSTEM PARAMETERS
0080 C
0081      COMMON CAAHM, CABAH, CABFN(3), CABFP(3), CABHM
0082      COMMON CABS(2), CAC, CACP, CADF, CADH
0083      COMMON CADS, CAEAF, CAHSAF, CAHSTS, CAIF
0084      COMMON CAR3FC, CASF, CASNC, CSTES, CSTRM
0085      COMMON CSTRP, FAVG(5), PFSTSP, PFAC, RCLTEC(29,34)
0086      COMMON TCAR(5), THICK(10), THKTS, TTL(40)
0087 C
0088      INTEGER EXIT, CLMA, GDES, GWHY, OVRD, SBSL
0089      INTEGER SCEC, SWHY, TPSL, VGTA, ANIM
0090      INTEGER CLIMAT, GENDES, GRWHYD, OVRBDN
0091      INTEGER SOCECN, SUBSOI, SURHYD, TOPSOI
0092      INTEGER VEGETA, ANIMAL
0093      INTEGER RCLIMA, RGENDE, RGRWHY, ROVRBD, RSOCEC
0094      INTEGER RSUBSO, RSURHY, RTOPSO, RVEGET, RANIMA
0095      INTEGER RCLTEC, TTL
0096 C
0097      INTEGER COMMON (1)
0098      EQUIVALENCE (COMMON (1), ITEK (1))
0099      EQUIVALENCE (IARRY(1), LUT)
0100      EQUIVALENCE (IARY2(1), ISTRK)
0101      EQUIVALENCE (IARY2(2), ISECT)
0102      EQUIVALENCE (IARY2(3), ICODE)
0103      EQUIVALENCE (IARY2(4), LEN)
0104 C
0105      LOGICAL LER
0106 C
0107 C      FOR INPUT MODE, ENSURE THAT PREVIOUSLY
0108 C      DEFINED DATA CANNOT BE ACCESSED
0109      IF(MODE.EQ.2.OR.MODE.EQ.3) GOTO 2
0110      DO 1 K = 1, 5

```



```

0111          NSPF(K) = 0
0112          GCPA(K) = 0.
0113      1      CONTINUE
0114  C          IF THE USER IS EDITING RESPONSES, BRANCH TO
0115  C          THE EDIT MENU.
0116  C          IF GRADE SPOILS ONLY OPTION, BRANCH TO 20
0117      2      IF(MODE.EQ.2) GOTO 500
0118          IF(MODE.EQ.4) GOTO 20
0119  C          INPUT CATEGORY RESPONSES TO GENERAL DESCRIPTION
0120  C          SET ITYPE FOR FUTURE REFERENCE
0121      10 CALL GENDE
0122          ITYPE = RGENDE(1)
0123  C          IF THE USER HAS BEEN EDITING EXPECTATIONS, OR
0124  C          IF HE WANTS OUT OF THE INPUT MODE, WE'RE DONE
0125          IF(MODE.EQ.3.OR.EXIT.EQ.0) RETURN
0126      15 GOTO(20,50) RGENDE(1)
0127  C          DRAGLINE MINE -> INPUT MINE DESCRIPTION PARAMETERS,
0128  C          THEN SCHEDULE THE DRAGLINE GRADING EXECUTIVE
0129      20 IOPTN = 1
0130      22 GOTO(25,30,35) RGENDE(2)
0131      25 CALL DLOID
0132          IF(EXIT.EQ.0) RETURN
0133          GOTO 40
0134      30 CALL DLMID
0135          IF(EXIT.EQ.0) RETURN
0136          GOTO 40
0137      35 CALL DLFID
0138          IF(EXIT.EQ.0) RETURN
0139      40 CALL DLGE
0140          IF(MODE.EQ.1) RETURN
0141          IF(MODE.EQ.2) GOTO 500
0142  C          GRADE SPOILS ONLY OPTION.
0143          IF(LEP) CALL ERASE
0144          IF(LEP) CALL HOME
0145          WRITE(LUT,2022)
0146      2022 FORMAT(/5X'SELECT ONE OF THE FOLLOWING OPTIONS'/
0147          >      5X'0-> EXIT FROM THIS OPTION'/
0148          >      5X'1-> RE-INPUT INITIAL DATA'/
0149          >      5X'2-> EDIT THE INITIAL DATA'/
0150          >      5X'3-> RE-INPUT FINAL SLOPES'//
0151          >      5X'ENTER YOUR SELECTION HERE -> _')
0152      24 READ(LUT,*) IOPTN
0153          IF(IOPTN.EQ.0) RETURN
0154          IF(IOPTN.EQ.1.OR.IOPTN.EQ.2) GOTO 22
0155          IF(IOPTN.EQ.3) GOTO 40
0156          WRITE(LUT,506) IOPTN
0157          GOTO 24
0158  C          TRUCK AND SHOVEL MINE -> ENTER THE COST OF GRADING
0159  C          OVERBURDEN, THEN SCHEDULE THE TRUCK AND SHOVEL
0160  C          GRADING EXECUTIVE
0161      50 WRITE(LUT,51)
0162      51 FORMAT(/,5X'*** TRUCK AND SHOVEL MINE ***'//,
0163          *5X'ENTER COST OF GRADING SPOILS(CENTS/CU.YD) -> _')
0164          READ(LUT,*) ANS
0165          IF(ANS.LT.0.) RETURN
0166          COGO=ANS

```



```

0167      LUO = 1
0168      IOPTN = 1
0169      55 CALL TSGE
0170          IF(NSPP(LUO).EQ.0) RETURN
0171      WRITE(LUT,56)
0172      56 FORMAT(' EXIT FROM TRUCK AND SHOVEL ROUTINES ?(YES OR NO) _')
0173      READ(LUT,57) IANS
0174      57 FORMAT(A2)
0175          IF(IANS.EQ.2HYES) RETURN
0176      LUO = LUO + 1
0177          IF(LUO .LE. 5) 55,60
0178  C          RESET MODE IF THE USER HAS CHANGED FROM A DRAGLINE
0179  C          TO A TRUCK AND SHOVEL TYPE MINE
0180      60 IF(ITYPE.NE.RGENDE(1)) MODE = 2
0181          IF(MODE.EQ.1) RETURN
0182  C          ***EDIT MENU***
0183      500 IF(LER) CALL ERASE
0184          IF(LER) CALL HOME
0185      WRITE(LUT,501)
0186      501 FORMAT(/,5X'SELECT ONE OF THE FOLLOWING OPTIONS :'/,
0187          *5X'0) GET ME OUT OF HERE'/,
0188          *5X'1) EDIT TYPE OF MINE'/,
0189          *5X'2) EDIT COST TO EXCAVATE SPOIL'/,
0190          *5X'3) EDIT STAGE IN MINING SEQUENCE'/,
0191          *5X'4) EDIT SLOPE OF 10 RANDOM POINTS'/,
0192          *5X'5) EDIT THE SPOILS GRADING DATA'/,
0193          *5X'ENTER YOUR SELECTION HERE -> _')
0194      503 READ(LUT,*) IOPTN
0195          IF(IOPTN.GE.0.AND.IOPTN.LE.5) 510,505
0196      505 WRITE(LUT,506) IOPTN
0197      506 FORMAT(/,5X,I2'? RE-ENTER YOUR SELECTION.->_')
0198      GOTO 503
0199      510 IF(IOPTN.EQ.0) RETURN
0200      GOTO(600,700,800,700,900) IOPTN
0201  C          USER WANTS TO EDIT THE TYPE OF MINE. IF HE DOES CHANGE
0202  C          THE TYPE OF MINE, THEN WE ARE TEMPORARILY BACK IN THE
0203  C          INPUT MODE AND MUST RE-INPUT ALL OF THE GRADING VARIABLES
0204      600 ITYPE = RGENDE(1)
0205      CALL GENDE
0206          IF(ITYPE.NE.RGENDE(1)) 610,500
0207  C          USER HAS CHANGED THE TYPE OF MINE -
0208  C          RE-INITIALIZE GRADING PARAMETERS
0209      610 DO 615 K=128,794
0210      615 COMMON(K)=0
0211          IF(RGENDE(1).EQ.2) MODE = 1
0212      GOTO 15
0213  C          USER IS EITHER EDITING THE COST TO EXCAVATE SPOIL, OR
0214  C          THE SLOPE OF 10 RANDOM POINTS IN THE AREA. THIS WILL
0215  C          HAVE NO EFFECT ON COSTS ALREADY CALCULATED
0216      700 CALL GENDE
0217      GOTO 500
0218  C          USER WANTS TO CHANGE THE STAGE IN MINING SEQUENCE. FOR
0219  C          THE DRAGLINE MINE, WE HAVE TO RE-COMPUTE THE GRADING
0220  C          COSTS. THIS WILL HAVE NO EFFECT ON THE TRUCK AND SHOVEL
0221  C          COMPUTATIONS, OTHER THAN FOR REHANDLE INFORMATION
0222      800 ISTAGE = RGENDE(2)

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```

0223      CALL GENDE
0224      IF(ISTAGE.NE.RGENDE(2)) 810,500
0225      810  IF(RGENDE(1).EQ.1) 20,820
0226      820  IF(RGENDE(2).EQ.1) 830,500
0227  C      USER HAS CHANGED TO THE OPENING CUT SITUATION FROM ONE OF
0228  C      THE OTHER TWO STAGES.  RE-COMPUTE THE GRADING COSTS FOR ALL
0229  C      FIVE LAND USE OPTIONS AFTER SETTING RE-HANDLE VOLUMES TO
0230  C      ZERO (TRUCK AND SHOVEL MINE)
0231      830  DO 835 LUO = 1,5
0232      REHVOL(LUO) = 0.
0233      IOPTN = 2
0234      835  CALL TSST
0235      GOTO 500
0236  C      USER WANTS TO EDIT THE MINE DATA
0237      900  GOTO(910,950) RGENDE(1)
0238  C      DRAGLINE EDIT ** SET IOPTN TO 2 AND BRANCH TO 22
0239      910  IOPTN = 2
0240      GOTO 22
0241  C      TRUCK AND SHOVEL EDIT ** GET LUO AND SCHEDULE TSGE
0242      950  WRITE(LUT,951)
0243      951  FORMAT(/,5X"WHICH LAND USE OPTION DO YOU WISH TO CONSIDER ?"/,
0244      *5X"0) NONE"/,
0245      *5X"1) CROPLAND"/,
0246      *5X"2) NATIVE VEGETATION"/,
0247      *5X"3) WILDLIFE"/,
0248      *5X"4) WATER RECREATION"/,
0249      *5X"5) HIGH USE"/,
0250      *5X"ENTER YOUR CHOICE HERE -> _")
0251      READ(LUT,*) LUO
0252      IF(LUO.EQ.0) GOTO 500
0253      IF(LUO.GE.1.AND.LUO.LE.5) GOTO 960
0254      WRITE(LUT,506) LUO
0255      GOTO 950
0256      960  CALL TSGE
0257      GOTO 500
0258      END
0259  END$

```



&GENDE T=00004 IS ON CR00015 USING 00039 BLKS R=0000

```
0001  FTN4
0002                      SUBROUTINE GENDE
0003  C      --- GENERAL DESCRIPTION CATEGORY RESPONSES ---
0004  C
0005  C LEVEL 2
0006  C
0007  C GENDE IS ACCESSED BY GDE TO SCHEDULE INPUTS AND EDITS TO
0008  C CATEGORY RESPONSES, AND EDITS TO EXPECTATION OF SUCCESS
0009  C VALUES TO CATEGORY 1, USING FULL DISPLAY
0010  C
0011  C THE CALLING SEQUENCE IS :      CALL GENDE
0012  C
0013  C GENDE USES THE TCS ROUTINES : ERASE AND HOME
0014  C
0015  C THE LOCAL VARIABLES ARE :
0016  C
0017  C      IANS      -> ANSWER CELL
0018  C      II        -> 'I' INDEX [I,J] TO GENDES ARRAY
0019  C      IOLD      -> PRE-EDIT CATEGORY RESPONSE VALUE
0020  C      LUORN     -> LAND USE OPTION REFERENCE NUMBER
0021  C      NN        -> HEADING NUMBER
0022  C
0023  C THIS ROUTINE WAS WRITTEN BY GREEN
0024  C
0025  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0026  C
0027  C =====
0028  C
0029  C
0030  C      TEKTRONIX COMMON
0031  C
0032  C      COMMON ITEK (45)
0033  C
0034  C      LOGICAL UNITS AND COMMON LOCATION
0035  C
0036  C      COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0037  C
0038  C      POINTERS
0039  C
0040  C      COMMON EXIT      ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0041  C      COMMON IOPTN     ,IOVR(7),IPNTR  ,ISOC(6),ISUB(8)
0042  C      COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT  ,LUO
0043  C      COMMON MODE      ,NANM      ,NCLI      ,NGEN      ,NGRW
0044  C      COMMON NOVR      ,NSECTS    ,NSOC      ,NSUB      ,NSUR
0045  C      COMMON NTOP      ,NU        ,NVEG
0046  C
0047  C      GRADING PARAMETERS
0048  C
0049  C      COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCPA(5)
0050  C      COMMON GROVRS(5),HWHT(5,10),HWSLI(5,10),NSFP(5),PCEQ19(4)
0051  C      COMMON PERCNT(5,10),REHCPY(5),REHVOL(5),SLOPE(5,10),WEP
0052  C
0053  C      CATEGORY TEXT
0054  C
```



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0055      COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0056      COMMON OVRD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0057      COMMON TPSL(49,13),VGTA(15,13)
0058      C
0059      C      EXPECTATION VALUES
0060      C
0061      COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0062      COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0063      COMMON TOPSOI(33,6),VEGETA(10,6)
0064      C
0065      C      CATEGORY RESPONSES
0066      C
0067      COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0068      COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0069      COMMON RTOPSO(9),RVEGET(2)
0070      C
0071      C      FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0072      C
0073      COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHM
0074      COMMON CABS(2),CAC,CACP,CADF,CADH
0075      COMMON CADS,CAEAF,CAHSAP,CAHSTS,CAIP
0076      COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0077      COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0078      COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0079      C
0080      INTEGER EXIT,CLMA,GDES,GWHY,OVRD,SBSL
0081      INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0082      INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0083      INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0084      INTEGER VEGETA,ANIMAL
0085      INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0086      INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0087      INTEGER RCLTEC,TTL
0088      C
0089      INTEGER COMMON (1)
0090      EQUIVALENCE (COMMON (1), ITEK (1))
0091      EQUIVALENCE (IARY (1), LUT)
0092      EQUIVALENCE (IARY2 (1), ISTRK)
0093      EQUIVALENCE (IARY2 (2), ISECT)
0094      EQUIVALENCE (IARY2 (3), ICODE)
0095      EQUIVALENCE (IARY2 (4), LEN)
0096      C
0097      LOGICAL LER
0098      C      DISPLAY MODE
0099      1 IF (.NOT. LER) GOTO 5
0100      CALL ERASE
0101      CALL HOME
0102      5 GOTO (10,20,30) MODE
0103      10 WRITE(LUT, 1010)
0104      GOTO 40
0105      20 WRITE(LUT, 2010)
0106      GOTO 40
0107      30 WRITE(LUT, 3010)
0108      40 IF ( MODE .EQ. 1 ) 45, 47
0109      45 GOTO ( 100, 200, 300 ) LEXIT
0110      C      EDIT MODE

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0111      47 IF ( MODE .EQ. 2 ) GOTO (100,150,200,300) IOFTN
0112      GOTO 51
0113 C          USER INPUT -> EDIT HEADING
0114      50 IF (LER) CALL ERASE
0115      IF (LER) CALL HOME
0116      51 WRITE(LUT, 2020)
0117      52 READ(LUT, 2030) IANS
0118      IF(IANS .EQ. 2HA ) GOTO 100
0119      IF(IANS .EQ. 2HB ) GOTO 200
0120      IF(IANS .EQ. 2HC ) GOTO 300
0121      IF(IANS .EQ. 2HND) GOTO 5000
0122      WRITE(LUT, 1200)
0123      GOTO 51
0124 C          ----- EDIT EXPECTATIONS -----
0125 C          USER INPUT -> SUBHEADING NUMBER
0126      55 WRITE (LUT, 3020)
0127      56 READ (LUT, *) II
0128      GOTO 90
0129 C          USER INPUT -> LAND USE OPTION REFERENCE NUMBER
0130      60 IF(LER) CALL ERASE
0131      IF(LER) CALL HOME
0132      WRITE (LUT, 3030)
0133      61 READ (LUT, *) LUORN
0134      IF (LUORN .GE. 1 .AND. LUORN .LE. 6 ) GOTO 65
0135      WRITE (LUT, 1200)
0136      GOTO 61
0137      65 II = II + L
0138 C          USER INPUT -> EXPECTATION VALUE
0139      70 WRITE (LUT, 3040)
0140      71 READ (LUT, *) GENDES (II, LUORN)
0141      IF (GENDES (II,LUORN) .GE. 0 .AND. GENDES (II,LUORN) .LE. 4)
0142      , GOTO 50
0143      WRITE (LUT, 3050)
0144      GOTO 71
0145 C          ----- EDIT RESPONSES -----
0146      75 IOLD = RGENDE (NN)
0147      77 WRITE (LUT, 2040) IOLD
0148      GOTO 85
0149 C          ----- INPUT RESPONSES -----
0150 C          USER INPUT -> RGENDE (NN)
0151      80 WRITE (LUT, 2000)
0152      85 READ (LUT, *) RGENDE (NN)
0153      II = RGENDE (NN)
0154      IF (II .EQ. 0) GOTO (5000,91) MODE
0155      90 IF (II .GE. 1 .AND. II .LE. IGEN (NN)) GOTO (350,5001,60) MODE
0156      91 WRITE (LUT, 1200)
0157      GOTO 85
0158 C          DISPLAY HEADING A :
0159      100 NN = 1
0160      L = 0
0161      J = L + 1
0162      WRITE(LUT, 1000) (GDES(1,I),I=1,13)
0163      WRITE(LUT, 1020)
0164      WRITE(LUT, 1050) (GDES(2,I),I=1,13)
0165      WRITE(LUT, 1100) (GDES(3,I),I=1,13),(GENDES(1,I),I=1,6)
0166      WRITE(LUT, 1100) (GDES(4,I),I=1,13),(GENDES(2,I),I=1,6)

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0167      GOTO( 80, 75, 55 ) MODE
0168 C      USER INPUT -> COST TO EXCAVATE SPOIL
0169      150 WRITE (LUT, 2050) CSTES
0170      160 WRITE (LUT, 1210)
0171      READ (LUT, *) CSTES
0172      IF ( MODE .EQ. 2) RETURN
0173 C      DISPLAY HEADING B :
0174      200 NN = 2
0175      L = IGEN (1)
0176      J = L + 1
0177      IF(MODE.NE.1) GOTO 201
0178      IF (LER) CALL ERASE
0179      IF (LER) CALL HOME
0180      201 WRITE(LUT, 1000) (GDES(1,I),I=1,13)
0181      205 WRITE(LUT, 1020)
0182      WRITE(LUT, 1050) (GDES(5,I),I=1,13)
0183      WRITE(LUT, 1050) (GDES(6,I),I=1,13)
0184      WRITE(LUT, 1100) (GDES(7,I),I=1,13),(GENDES(3,I),I=1,6)
0185      WRITE(LUT, 1100) (GDES(8,I),I=1,13),(GENDES(4,I),I=1,6)
0186      WRITE(LUT, 1100) (GDES(9,I),I=1,13),(GENDES(5,I),I=1,6)
0187      GOTO( 80, 75, 55) MODE
0188 C      DISPLAY HEADING C :
0189      300 IF(MODE .EQ. 1) GOTO 303
0190      WRITE(LUT, 1000) (GDES(1,I),I=1,13)
0191      303 WRITE(LUT, 1020)
0192      WRITE(LUT, 1050) ((GDES(K,I),I=1,13),K=10,12)
0193      NN = 3
0194      L = IGEN (1) + IGEN (2)
0195      J = L + 1
0196      DO 305 K=13,15
0197      WRITE(LUT, 1100) (GDES(K,I),I=1,13),(GENDES(J,I),I=1,6)
0198      305 J=J+1
0199      GOTO ( 80, 75, 55) MODE
0200 C      INPUT MODE DIRECTIONS
0201      350 IF ( NN .EQ. NGEN ) RETURN
0202      GOTO (160, 300) NN
0203 C      USER WANTS OUT -> SET EXIT TO ZERO AND RETURN
0204      5000 EXIT = 0
0205      5001 RETURN
0206 C      FORMAT STATEMENTS
0207      1000 FORMAT( 13A2,44('*'),/,26X,*,
0208      &10X,"STANDARD EXPECTATIONS",11X,*,/,
0209      &26X,44('*'),/,26X,"*CROP*",2X,
0210      &"NATIVE",2X,"*WILD*",2X,"WATER",3X,
0211      &"*HIGH*OTHER*",/,26X,
0212      &"*LAND*VEGETATION*LIFE*RECREATION*USE *",5X,*)
0213 C
0214      1020 FORMAT(70('*'),/,26X,"*4X*"10X*"4X*"10X*"4X*"5X*")
0215 C
0216      1050 FORMAT(13A2,  *,4X,*,10X,*,4X,*,
0217      &10X,*,4X,*,5X,*)
0218 C
0219      1100 FORMAT(13A2,
0220      &"* "I1" * "I1" * "I1" * "I1" * "I1" * "I1" *)
0221 C
0222      1200 FORMAT("YOU HAVE TYPED IN AN ILLEGAL ANSWER.",

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0223      &/,'GIVE HER ANOTHER SHOT -> _')
0224 C
0225 1210 FORMAT(/'AVERAGE COST TO EXCAVATE SPOIL (CENTS/CU.YD.)-> _')
0226 C
0227 2000 FORMAT('ENTER THE APPROPRIATE',5X,44('*'),/,
0228      &'NUMBER, OR ZERO TO QUIT -> _')
0229 C
0230 1010 FORMAT( 17X'INPUT RESPONSES/GENERAL DESCRIPTION'//)
0231 C
0232 2010 FORMAT( 17X'EDIT RESPONSES/GENERAL DESCRIPTION'//)
0233 C
0234 3010 FORMAT( 17X'EDIT EXPECTATIONS/GENERAL DESCRITFION'//)
0235 C
0236 2020 FORMAT( 5X'IN WHICH HEADING IS YOUR DESIRED EDIT ?'/,
0237      &5X'(ENTER A,B,C, OR NONE) -> _')
0238 C
0239 2030 FORMAT(A2)
0240 C
0241 2040 FORMAT( 5X'YOUR CURRENT RESPONSE IS ->'12,/,
0242      &5X'ENTER YOUR NEW RESPONSE HERE -> _')
0243 C
0244 2050 FORMAT( 5X'COST TO EXCAVATE SPOIL IS CURRENTLY'F5.1,1X
0245      &'CENTS/CU. YD.'/)
0246 C
0247 3020 FORMAT( 5X'IN WHICH SUB-HEADING IS THE EXPECTATION VALUE'/,
0248      &5X'YOU WISH TO CHANGE ? (ENTER THE APPROPRIATE NUMBER) -> _')
0249 C
0250 3030 FORMAT(/5X'SELECT THE LAND USE OPTION YOU WISH TO CHANGE'/'
0251      > 1X' -1- / -2- / -3- / -4- / -5- / -6- /'/'
0252      > 1X'CROPLAND/NAT.VEG./WILDLIFE/WAT.REC./HIGH USE/ OTHER/'
0253      >/5X'ENTER YOUR SELECTION HERE -> _')
0254 C
0255 3040 FORMAT( 5X'ENTER YOUR NEW EXPECTATION VALUE HERE -> _')
0256 C
0257 3050 FORMAT (/, 5X'ERROR--> YOUR EXPECTATION VALUE MUST BE'/',
0258      &5X'0,1,2,3, OR 4 TO AVOID INTRODUCING A BIAS -> _')
0259 C
0260 3060 FORMAT( 5X'ANY MORE EDITS TO GENERAL DESCRIPTION ?'/',
0261      &5X'(YES OR NO) -> _')
0262      END
0263 END$

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&GETID T=00004 IS ON CR00015 USING 00039 BLKS R=0000

```
0001 FTN4
0002 C
0003 SUBROUTINE GETID
0004 C ---GET INITIAL DATA---
0005 C
0006 C LEVEL 1
0007 C
0008 C GETID IS ACCESSED BY CLAIM TO INITIALIZE THE COMMON BLOCK.
0009 C INITIALIZATION IS ACHIEVED BY READING THE FOUR FILES :
0010 C EXPTNS,TEXTEC,MLT, AND CCFTS.
0011 C
0012 C THE CALLING SEQUENCE IS : CALL GETID
0013 C
0014 C GETID USES THE SYSTEM ROUTINE SPOLU TO ACCESS THE FILES
0015 C
0016 C THIS SUBROUTINE IS SWAPPED IN BY PROGRAM GETIX
0017 C
0018 C THE LOCAL VARIABLES ARE :
0019 C
0020 C CCFTS -> 3 WORD ID SEGMENT OF FILE CCFTS (INTEGER)
0021 C EXPTNS -> 3 WORD ID SEGMENT OF FILE EXPTNS (INTEGER)
0022 C MLT -> 3 WORD ID SEGMENT OF FILE MLT (INTEGER)
0023 C TEXTEC -> 3 WORD ID SEGMENT OF FILE TEXTEC (INTEGER)
0024 C
0025 C GETID RETURNS AN EXIT VALUE OF -1, SHOULD FILE ACCESS FAIL.
0026 C
0027 C THIS ROUTINE WAS WRITTEN BY GREEN/EASTMAN
0028 C
0029 C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0030 C
0031 C =====
0032 C
0033 C TEKTRONIX COMMON
0034 C
0035 C COMMON ITEK (45)
0036 C
0037 C LOGICAL UNITS AND COMMON LOCATION
0038 C
0039 C COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0040 C
0041 C POINTERS
0042 C
0043 C COMMON EXIT ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0044 C COMMON IOFTN ,IOVR(7),IPNTR ,ISOC(6),ISUB(8)
0045 C COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT ,LUO
0046 C COMMON MODE ,NANM ,NCLI ,NGEN ,NGRW
0047 C COMMON NOVR ,NSECTS ,NSOC ,NSUB ,NSUR
0048 C COMMON NTOP ,NU ,NVEG
0049 C
0050 C GRADING PARAMETERS
0051 C
0052 C COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCFA(5)
0053 C COMMON GRDUBS(5),HWHT(5,10),HWSLI(5,10),NSPF(5),PCEQ19(4)
0054 C COMMON PERCNT(5,10),REHCPY(5),REHVOL(5),SLOPE(5,10),WBF
```



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0055 C
0056 C CATEGORY TEXT
0057 C
0058 COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0059 COMMON OVBD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0060 COMMON TPSSL(49,13),VGTA(15,13)
0061 C
0062 C EXPECTATION VALUES
0063 C
0064 COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0065 COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0066 COMMON TOPSOI(33,6),VEGETA(10,6)
0067 C
0068 C CATEGORY RESPONSES
0069 C
0070 COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0071 COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0072 COMMON RTOPSO(9),RVEGET(2)
0073 C
0074 C FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0075 C
0076 COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHM
0077 COMMON CABS(2),CAC,CACF,CAIF,CADH
0078 COMMON CADS,CAEAF,CAHSAF,CAHSTS,CAIF
0079 COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0080 COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0081 COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0082 C
0083 INTEGER EXIT,CLMA,GDES,GWHY,OVBD,SBSL
0084 INTEGER SCEC,SWHY,TPSSL,VGTA,ANIM
0085 INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0086 INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0087 INTEGER VEGETA,ANIMAL
0088 INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0089 INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0090 INTEGER RCLTEC,TTL
0091 C
0092 INTEGER COMMON (1)
0093 EQUIVALENCE (COMMON (1), ITEK (1))
0094 EQUIVALENCE (IARRY (1), LUT)
0095 EQUIVALENCE (IARY2 (1), ISTRK)
0096 EQUIVALENCE (IARY2 (2), ISECT)
0097 EQUIVALENCE (IARY2 (3), ICODE)
0098 EQUIVALENCE (IARY2 (4), LEN)
0099 C
0100 LOGICAL LER
0101 C
0102 INTEGER EXPTNS (3), TEXTEC (3), MLT (3), CCFTS (3)
0103 C
0104 DATA EXPTNS /2HEX,2HFT,2HNS/
0105 DATA TEXTEC /2HTE,2HXT,2HEC/
0106 DATA ICR/15/
0107 DATA MLT /2HML,2HT ,2H /
0108 DATA CCFTS /2HCC,2HFT,2HS /
0109 C
0110 WRITE (LUT, 2000)

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0111 2000 FORMAT (//5X*HELLO. I'LL NEED A FEW SECONDS TO GET ORGANIZED...")
0112 C OPEN FILE EXPTNS (EXPECTATION OF SUCCESS FILE)
0113 C
0114 CALL SPOLU(LUF,EXPTNS,2,1,ICR)
0115 IF (LUF .LT. 0) GOTO 9000
0116 C
0117 C READ THE NUMBER OF SECTIONS OF INFORMATION
0118 C
0119 READ(LUF,1000) NSECTS
0120 C
0121 C READ THE NUMBER OF HEADINGS IN EACH CATEGORY
0122 C
0123 READ(LUF,1010) NGEN,(IGEN(I),I=1,NGEN)
0124 READ(LUF,1010) NCLI,(ICLI(I),I=1,NCLI)
0125 READ(LUF,1010) NTOP,(ITOP(I),I=1,NTOP)
0126 READ(LUF,1010) NSUB,(ISUB(I),I=1,NSUB)
0127 READ(LUF,1010) NOVR,(IOVR(I),I=1,NOVR)
0128 READ(LUF,1010) NSUR,(ISUR(I),I=1,NSUR)
0129 READ(LUF,1010) NGRW,(IGRW(I),I=1,NGRW)
0130 READ(LUF,1010) NVEG,(IVEG(I),I=1,NVEG)
0131 READ(LUF,1010) NANM,(IANM(I),I=1,NANM)
0132 READ(LUF,1010) NSOC,(ISOC(I),I=1,NSOC)
0133 C
0134 C CATAGORY 1 -> GENERAL DESCRIPTION
0135 C
0136 K=1
0137 DO 10 J=1,NGEN
0138 DO 10 L=1,IGEN(J)
0139 READ (LUF,1020) (GENDES(K,I),I=1,6)
0140 K=K+1
0141 10 CONTINUE
0142 C CATAGORY 2 -> CLIMATOLOGY
0143 C
0144 K=1
0145 DO 20 J=1,NCLI
0146 DO 20 L=1,ICLI(J)
0147 READ (LUF,1020) (CLIMAT(K,I),I=1,6)
0148 K=K+1
0149 20 CONTINUE
0150 C
0151 C CATAGORY 3 -> TOPSOIL
0152 C
0153 K=1
0154 DO 30 J=1,NTOP
0155 DO 30 L=1,ITOP(J)
0156 READ (LUF,1020) (TOPSOI (K,I), I=1,6)
0157 K=K+1
0158 30 CONTINUE
0159 C
0160 C CATEGORY 4 -> SUBSOIL
0161 C
0162 K=1
0163 DO 40 J=1,NSUB
0164 DO 40 L=1, ISUB(J)
0165 READ (LUF,1020) (SUBSOI(K,I),I=1,6)
0166 K=K+1

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0167      40 CONTINUE
0168  C
0169  C      CATEGORY 5 -> OVERBURDEN
0170  C
0171      K=1
0172      DO 50 J=1,NOVR
0173      DO 50 L=1,IOVR(J)
0174      READ (LUF,1020) (OVRBDN(K,I),I=1,6)
0175      K=K+1
0176      50 CONTINUE
0177  C
0178  C      CATEGORY 6 -> SURFACE WATER HYDROLOGY
0179  C
0180      K=1
0181      DO 60 J=1,NSUR
0182      DO 60 L=1,ISUR(J)
0183      READ (LUF,1020) (SURHYD(K,I),I=1,6)
0184      K=K+1
0185      60 CONTINUE
0186  C
0187  C      CATEGORY 7 -> GROUND WATER HYDROLOGY
0188  C
0189      K=1
0190      DO 70 J=1,NGRW
0191      DO 70 L=1,IGRW(J)
0192      READ (LUF,1020) (GRWHYD(K,I),I=1,6)
0193      K=K+1
0194      70 CONTINUE
0195  C
0196  C      CATEGORY 8 -> VEGETATION
0197  C
0198      K=1
0199      DO 80 J=1,NVEG
0200      DO 80 L=1,IVEG(J)
0201      READ (LUF,1020) (VEGETA(K,I), I=1,6)
0202      K=K+1
0203      80 CONTINUE
0204  C
0205  C      CATEGORY 9 -> ANIMALS
0206  C
0207      K=1
0208      DO 90 J=1,NANM
0209      DO 90 L=1,IANM(J)
0210      READ (LUF,1020) (ANIMAL(K,I),I=1,6)
0211      K=K+1
0212      90 CONTINUE
0213  C
0214  C      CATEGORY 10 -> SOCIO-ECONOMICS
0215      K=1
0216      DO 100 J=1,NSOC
0217      DO 100 L=1,ISOC(J)
0218      READ (LUF,1020) (SOCECN(K,I),I=1,6)
0219      K=K+1
0220      100 CONTINUE
0221  C
0222  C      CLOSE FILE EXPTNS

```

```

0223 C
0224 CALL SPOLU(LUF,EXPTNS,2,2,ICR)
0225 C
0226 C OPEN FILE TEXTEC (TEXT FOR ENVIRONMENTAL CATEGORIES)
0227 C
0228 CALL SPOLU(LUF,TEXTEC,2,1,ICR)
0229 IF (LUF .LT. 0) GOTO 9002
0230 C
0231 C READ IN THE TEXT
0232 C
0233 READ(LUF,1030) ((GDES(K,1),I=1,13),K=1,15),
0234 & ((CLMA(K,I),I=1,13),K=1,13), ((TPSL(K,I),I=1,13),K=1,49),
0235 & (SBSL(I),I=1,13), ((OVRD(K,I),I=1,13),K=1,11),
0236 & ((SWHY(K,1),I=1,13),K=1,44), ((GWHY(K,I),I=1,13),K=1,22),
0237 & ((VGTA(K,I),I=1,13),K=1,15), ((ANIM(K,I),I=1,13),K=1,23),
0238 & ((SCEC(K,I),I=1,13),K=1,33)
0239 C
0240 C CLOSE FILE TEXTEC
0241 C
0242 CALL SPOLU(LUF,TEXTEC,2,2,ICR)
0243 C
0244 C OPEN FILE MLT (MASTER LIST OF TECHNIQUES)
0245 C
0246 WRITE (LUT, 2001)
0247 2001 FORMAT (/5X'JUST A FEW SECONDS MORE....')
0248 CALL SPOLU(LUF,MLT,2,1,ICR)
0249 IF (LUF .LT. 0) GOTO 9004
0250 C
0251 C READ IN THE TEXT
0252 C
0253 DO 15 I=1,29
0254 15 READ(LUF,1040) (RCLTEC(I,J),J=1,34)
0255 900 CONTINUE
0256 C
0257 C CLOSE FILE MLT
0258 C
0259 CALL SPOLU(LUF,MLT,2,2,ICR)
0260 C
0261 C OPEN FILE CCFTS (COST AND CONVERSION FACTORS FOR TECON SUBSYSTEM)
0262 C
0263 CALL SPOLU(LUF,CCFTS,2,1,ICR)
0264 IF (LUF .LT. 0) GOTO 9006
0265 C READ IN THE COSTS
0266 C
0267 READ (LUF, 1050) CAAHM
0268 READ (LUF, 1050) CABAH
0269 READ (LUF, 1050) CABFN (1)
0270 READ (LUF, 1050) CABFN (2)
0271 READ (LUF, 1050) CABFN (3)
0272 READ (LUF, 1050) CABFP (1)
0273 READ (LUF, 1050) CABFP (2)
0274 READ (LUF, 1050) CABFP (3)
0275 READ (LUF, 1050) CABHM
0276 READ (LUF, 1050) CABS (1)
0277 READ (LUF, 1050) CABS (2)
0278 READ (LUF, 1050) CAC

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0279      READ (LUF, 1050) CACP
0280      READ (LUF, 1050) CADF
0281      READ (LUF, 1050) CADH
0282      READ (LUF, 1050) CADS
0283      READ (LUF, 1050) CAEAF
0284      READ (LUF, 1050) CAHSAF
0285      READ (LUF, 1050) CAHSTS
0286      READ (LUF, 1050) CAIP
0287      READ (LUF, 1050) CAR3FC
0288      READ (LUF, 1050) CASF
0289      READ (LUF, 1050) CASNC
0290      READ (LUF, 1050) PFSTSP
0291      READ (LUF, 1050) PFAC
0292      C
0293      C      CLOSE FILE CCFTS AND RETURN
0294      CALL SPOLU (LUF,CCFTS,2,2,ICR)
0295      RETURN
0296      C
0297      C      PROCESS FILE OPEN ERRORS
0298      C
0299      9000 WRITE (LUT, 9001) LUF
0300      9001 FORMAT (5X"EXPTNS FILE OPEN ERROR ->"I10)
0301      EXIT = -1
0302      RETURN
0303      9002 WRITE (LUT, 9003) LUF
0304      9003 FORMAT (5X"TEXTFC FILE OPEN ERROR ->"I10)
0305      EXIT = -1
0306      RETURN
0307      9004 WRITE (LUT, 9005) LUF
0308      9005 FORMAT (5X"MLT FILE OPEN ERROR ->"I10)
0309      EXIT = -1
0310      RETURN
0311      9006 WRITE (LUT, 9007) LUF
0312      9007 FORMAT (5X"CCFTS FILE OPEN ERROR ->"I10)
0313      EXIT = -1
0314      RETURN
0315      C
0316      C      FORMAT STATEMENTS
0317      C
0318      1000 FORMAT (I2)
0319      C
0320      1010 FORMAT (10I2)
0321      C
0322      1020 FORMAT (4X,6I1)
0323      C
0324      1030 FORMAT (2X,13A2)
0325      C
0326      1040 FORMAT (9X,34A2)
0327      C
0328      1050 FORMAT (F7.3)
0329      C
0330      C
0331      END
0332      END$

```

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0001  FTN4
0002                      SUBROUTINE GRAFS
0003  C
0004  C LEVEL 4
0005  C
0006  C SUBROUTINE GRAFS IS ACCESSED BY DLGE TO
0007  C DRAW GRAPHS OF THE FOLLOWING :
0008  C      1 : FINAL SLOPE VS. VOLUME GRADED
0009  C      2 : FINAL SLOPE VS. TOTAL COST
0010  C      3 : FINAL SLOPE VS. FINAL WIDTH (OPENING CUT OPTION)
0011  C      -OR- FINAL SLOPE VS. COST/ACRE (MINE RUN & FINAL CUT OPTION)
0012  C GRAPHS ARE AVAILABLE ON EITHER THE TERMINAL OR THE CALCOMP PLOTTER
0013  C
0014  C THE CALLING SEQUENCE IS :      CALL GRAFS
0015  C
0016  C GRAFS SCHEDULES THE SUBROUTINES :
0017  C
0018  C      AXES TO DRAW AXES FOR THE GRAPHS
0019  C      DSPLA TO DISPLAY THE CURRENT INITIAL DATA
0020  C
0021  C GRAFS USES THE TCS ROUTINES : ANMOD,BELL,DRAWA,
0022  C                               MOVAB,MOVEA,SWNDO,
0023  C                               FINTT, AND VWNDO
0024  C AND THE SYSTEM ROUTINES SETPM AND GETLU
0025  C THIS ROUTINE WAS WRITTEN BY EASTMAN/GREEN
0026  C
0027  C ***** RELEASE 1.0 - APRIL 1, 1979 *****
0028  C
0029  C =====
0030  C
0031  C      TEKTRONIX COMMON
0032  C
0033  C      COMMON ITEK (45)
0034  C
0035  C      LOGICAL UNITS AND COMMON LOCATION
0036  C
0037  C      COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0038  C
0039  C      POINTERS
0040  C
0041  C      COMMON EXIT      ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0042  C      COMMON IOPTN     ,IOVR(7),IFNTR ,ISOC(6),ISUB(8)
0043  C      COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT ,LUO
0044  C      COMMON MODE      ,NANM ,NCLI ,NGEN ,NGRW
0045  C      COMMON NOVR      ,NSECTS ,NSOC ,NSUB ,NSUR
0046  C      COMMON NTOP      ,NU ,NVEG
0047  C
0048  C      GRADING PARAMETERS
0049  C
0050  C      COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCFA(5)
0051  C      COMMON GROVBS(5),HWHT(5,10),HWSL1(5,10),NSFP(5),PCEQ19(4)
0052  C      COMMON PERCNT(5,10),REHCFY(5),REHVOL(5),SLOPE(5,10),WBF
0053  C
0054  C      CATEGORY TEXT

```



```

0055 C
0056 COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0057 COMMON OVRBD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0058 COMMON TPSL(49,13),VGTA(15,13)
0059 C
0060 C EXPECTATION VALUES
0061 C
0062 COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0063 COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0064 COMMON TOPSOI(33,6),VEGETA(10,6)
0065 C
0066 C CATEGORY RESPONSES
0067 C
0068 COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0069 COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0070 COMMON RTOPSO(9),RVEGET(2)
0071 C
0072 C FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0073 C
0074 COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHM
0075 COMMON CABS(2),CAC,CACP,CADF,CADH
0076 COMMON CADS,CAEAF,CAHSAF,CAHSTS,CAIP
0077 COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0078 COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0079 COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0080 C
0081 INTEGER EXIT,CLMA,GDES,GWHY,OVRBD,SBSL
0082 INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0083 INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0084 INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0085 INTEGER VEGETA,ANIMAL
0086 INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0087 INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0088 INTEGER RCLTEC,TTL
0089 C
0090 INTEGER COMMON (1)
0091 EQUIVALENCE (COMMON (1), ITEK (1))
0092 EQUIVALENCE (IARRY (1), LUT)
0093 EQUIVALENCE (IARY2 (1), ISTRK)
0094 EQUIVALENCE (IARY2 (2), ISECT)
0095 EQUIVALENCE (IARY2 (3), ICODE)
0096 EQUIVALENCE (IARY2 (4), LEN)
0097 C
0098 LOGICAL LER
0099 C
0100 C =====
0101 C
0102 COMMON /TABLE/
0103 > TBLV, TBLT, TBLA, TBLs, JCOUNT, TSMIN, KODE,
0104 > TSMAX, TVMIN, TVMAX, TAMIN, TAMAX, TTMIN, TTMAX
0105 C
0106 DIMENSION TBLV(12),TBLT(12),TBLA(12),TBLs(12)
0107 C
0108 IANS = 2H
0109 LUD = LUT
0110 5 IARRY(3) = LUD

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```

0111 C
0112 C          FIRST : FINAL SLOPE VS. VOLUME GRADED
0113 IF(LUD .EQ. LUT) CALL ERASE
0114 IF(LUD .EQ. LUT) CALL HOME
0115 CALL SWND0(600,300,425,300)
0116 CALL VWND0(TVMIN,TVMAX-TVMIN,TSMIN,TSMAX-TSMIN)
0117 CALL AXES(600,425,TVMIN)
0118 CALL MOVAB(910,425)
0119 CALL ANMOD
0120 WRITE(LUD,1010)
0121 CALL MOVAB(850,400)
0122 CALL ANMOD
0123 WRITE(LUD,1020) TVMAX
0124 CALL MOVEA(TBLV(1),TBLS(1))
0125 DO 100 I=2,JCOUNT
0126 100 CALL DRAWA(TBLV(I),TBLS(I))
0127 C          SECOND : FINAL SLOPE VS TOTAL COST
0128 CALL SWND0(600,300,25,300)
0129 CALL VWND0(TTMIN,TTMAX-TTMIN,TSMIN,TSMAX-TSMIN)
0130 CALL AXES(600,25,TTMIN)
0131 CALL MOVAB(910,25)
0132 CALL ANMOD
0133 WRITE(LUD,1030)
0134 CALL MOVAB(850,5)
0135 CALL ANMOD
0136 WRITE(LUD,1020) TTMAX
0137 CALL MOVEA(TBLT(1),TBLS(1))
0138 DO 200 I=2,JCOUNT
0139 200 CALL DRAWA(TBLT(I),TBLS(I))
0140 C          THIRD : FINAL SLOPE VS. WIDTH (OR COST PER ACRE)
0141 CALL SWND0(85,300,25,300)
0142 CALL VWND0(TAMIN,TAMAX-TAMIN,TSMIN,TSMAX-TSMIN)
0143 CALL AXES(85,25,TAMIN)
0144 CALL MOVAB(390,25)
0145 CALL ANMOD
0146 IF(RGENDE(2).EQ.1) WRITE(LUD,1040)
0147 IF(RGENDE(2).NE.1) WRITE(LUD,1041)
0148 CALL MOVAB(300,5)
0149 CALL ANMOD
0150 WRITE(LUD,1020) TAMAX
0151 CALL MOVEA(TBLA(1),TBLS(1))
0152 DO 300 I=2,JCOUNT
0153 300 CALL DRAWA(TBLA(I),TBLS(I))
0154 CALL ANMOD
0155 CALL DSPLA
0156 C          PLOTTER COPY ?
0157 IF(IANS .NE. 2H ) GOTO 9000
0158 WRITE(LUT,1050)
0159 READ(LUT,1060) IANS
0160 IF(IANS .NE. 2HYE) GOTO 9000
0161 WRITE(LUT,1070)
0162 READ(LUT,*) SIZE
0163 IFLAG = 2
0164 CALL SETPM (SIZE,IFLAG)
0165 CALL INITT (LUT)
0166 CALL GETLU (LUD)

```

```

0167          GOTO 5
0168 9000 CALL FINTT (0.,0.)
0169      RETURN
0170 C          FORMAT STATEMENTS
0171 1010 FORMAT('VOL:CU-YD')
0172 1020 FORMAT(F10.1)
0173 1030 FORMAT('COST')
0174 1040 FORMAT('WIDTH')
0175 1041 FORMAT('COST/ACRE')
0176 1050 FORMAT(2X'PLOTTER COPY ? (YES OR NO) -> _')
0177 1060 FORMAT(A2)
0178 1070 FORMAT(2X'PLOT SIZE IN INCHES ALONG X AXIS -> _')
0179 C
0180      END
0181 END$

```

&GRWHY T=00004 IS ON CR00015 USING 00045 BLKS R=0000

```
0001  FTN4
0002          SUBROUTINE GRWHY
0003  C      FULL DISPLAY--CATEGORY 7 / GROUND WATER HYDROLOGY
0004  C
0005  C LEVEL 2
0006  C
0007  C GRWHY IS ACCESSED BY EIFD TO SCHEDULE INPUTS AND EDITS TO
0008  C CATEGORY RESPONSES, AND EDITS TO THE EXPECTATION OF SUCCESS
0009  C VALUES FOR CATEGORY 7 - GROUND WATER HYDROLOGY, USING
0010  C FULL DIPLAY
0011  C
0012  C THE CALLING SEQUENCE IS :      CALL GRWHY
0013  C
0014  C GRWHY USES THE TCS ROUTINES :  ERASE AND HOME
0015  C
0016  C THE LOCAL VARIABLES ARE:
0017  C
0018  C      CHNG  -> ARRAY CONTAINING HEADING LETTER CHANGES
0019  C      IANS  -> ANSWER CELL
0020  C      II    -> 'I' INDEX I (I,J) J TO GRWHYD ARRAY
0021  C      IOLD  -> PRE-EDIT CATEGORY RESPONSE VALUE
0022  C      LUORN -> LAND USE OPTION REFERENCE NUMBER
0023  C              1-> CROPLAND
0024  C              2-> NATIVE VEGETATION
0025  C              3-> WILDLIFE
0026  C              4-> WATER RECREATION
0027  C              5-> HIGH USE
0028  C              6-> OTHER
0029  C      NN    -> HEADING NUMBER
0030  C
0031  C GRWHY IS SWAPPED IN BY PROGRAM GRWHX
0032  C
0033  C THIS ROUTINE WAS WRITTEN BY GREEN
0034  C
0035  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0036  C =====
0037  C
0038  C      TEKTRONIX COMMON
0039  C
0040  C      COMMON ITEK (45)
0041  C
0042  C      LOGICAL UNITS AND COMMON LOCATION
0043  C
0044  C      COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0045  C
0046  C      POINTERS
0047  C
0048  C      COMMON EXIT  ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0049  C      COMMON IOPTN ,IOVR(7),IPNTR ,ISOC(6),ISUB(8)
0050  C      COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT ,LUO
0051  C      COMMON MODE  ,NANM ,NCLI ,NGEN ,NGRW
0052  C      COMMON NOVR  ,NSECTS ,NSOC ,NSUB ,NSUR
0053  C      COMMON NTOF  ,NU ,NVEG
0054  C
```



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0055 C      GRADING PARAMETERS
0056 C
0057      COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCPA(5)
0058      COMMON GRDUBS(5),HWHT(5,10),HWSLI(5,10),NSFP(5),PCEQ19(4)
0059      COMMON PERCNT(5,10),REHCPY(5),REHVOL(5),SLOPE(5,10),WRP
0060 C
0061 C      CATEGORY TEXT
0062 C
0063      COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0064      COMMON OVRD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0065      COMMON TPSL(49,13),VGTA(15,13)
0066 C
0067 C      EXPECTATION VALUES
0068 C
0069      COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0070      COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0071      COMMON TOPSOI(33,6),VEGETA(10,6)
0072 C
0073 C      CATEGORY RESPONSES
0074 C
0075      COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0076      COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0077      COMMON RTOPSO(9),RVEGET(2)
0078 C
0079 C      FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0080 C
0081      COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CAHBM
0082      COMMON CABS(2),CAC,CACP,CAUF,CADH
0083      COMMON CADS,CAEAF,CAHSAP,CAHSTS,CAIF
0084      COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0085      COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0086      COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0087 C
0088      INTEGER EXIT,CLMA,GDES,GWHY,OVRD,SBSL
0089      INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0090      INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0091      INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0092      INTEGER VEGETA,ANIMAL
0093      INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0094      INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0095      INTEGER RCLTEC,TTL
0096 C
0097      INTEGER COMMON (1)
0098      EQUIVALENCE (COMMON (1), ITEK (1))
0099      EQUIVALENCE (IARY2 (1), LUT)
0100      EQUIVALENCE (IARY2 (1), ISTRK)
0101      EQUIVALENCE (IARY2 (2), ISECT)
0102      EQUIVALENCE (IARY2 (3), ICODE)
0103      EQUIVALENCE (IARY2 (4), LEN)
0104 C
0105      LOGICAL LER
0106      INTEGER CHNG (2)
0107 C
0108      DATA CHNG/2H C,2H D/
0109 C
0110 C

```

```

0111 C          DISPLAY MODE
0112 1    IF (.NOT.LER) GOTO 5
0113      CALL ERASE
0114      CALL HOME
0115 5 GOTO (10,20,30) MODE
0116 10 WRITE (LUT,1010)
0117      GOTO 40
0118 20 WRITE (LUT,2010)
0119      GOTO 40
0120 30 WRITE (LUT,3010)
0121 40    IF ( MODE.GT.1) GOTO 50
0122      GOTO (100,200,300,400,500) LEXIT
0123 C          USER INPUT -> EDIT HEADING
0124 50 WRITE (LUT,2020)
0125 51 READ (LUT,2030) IANS
0126      IF (IANS.EQ.2HA ) GOTO 100
0127      IF (IANS.EQ.2HB ) GOTO 200
0128      IF (IANS.EQ.2HC ) GOTO 300
0129      IF (IANS.EQ.2HD ) GOTO 400
0130      IF (IANS.EQ.2HE ) GOTO 500
0131      IF (IANS.EQ.2HNO) RETURN
0132      WRITE (LUT,1200)
0133      GOTO 51
0134 C          EDIT EXPECTATIONS
0135 C          USER INPUT -> SUBHEADING NUMBER
0136 52 WRITE (LUT,3020)
0137 57 READ (LUT,*) II
0138      GOTO 85
0139 C          USER INPUT -> LAND USE OPTION REFERENCE NUMBER
0140 53 WRITE (LUT,3030)
0141 54 READ (LUT,*) LUORN
0142      IF (LUORN.GE.1.AND.LUORN.LE.6) GOTO 56
0143      WRITE (LUT,1200)
0144      GOTO 54
0145 56 II = II + L
0146 C          USER INPUT -> EXPECTATION VALUE
0147 58 WRITE (LUT,3040)
0148 59 READ (LUT,*) GRWHYD (II,LUORN)
0149      IF (GRWHYD (II,LUORN).GE.0.AND.GRWHYD (II,LUORN).LE.4)
0150      + GOTO 600
0151      WRITE (LUT,3050)
0152      GOTO 59
0153 C          EDIT RESPONSES
0154 60 IOLD = RGRWHY (NN)
0155 65 WRITE (LUT,2040) IOLD
0156      GOTO 83
0157 C          INPUT RESPONSES
0158 C          USER INPUT -> RGRWHY (NN)
0159 70 WRITE (LUT,2000)
0160 83 READ (LUT,*) RGRWHY (NN)
0161      IF (RGRWHY (NN).EQ.0) GOTO (900,87) MODE
0162      II = RGRWHY (NN)
0163 85    IF (II.GE.1.AND.II.LE.IGRW (NN)) GOTO (700,600,53) MODE
0164 87 WRITE (LUT,1200)
0165      GOTO (83,83,57) MODE
0166 C          DISPLAY HEADING A -> DEPTH TO GROUNDWATER

```



```

0167      100 NN = 1
0168          J = 1
0169              IF(MODE.NE.1.AND.LER) CALL ERASE
0170              IF(MODE.NE.1.AND.LER) CALL HOME
0171              WRITE (LUT,999) (GWHY (1,I),I = 1,13)
0172              WRITE (LUT,1000) (GWHY (2,I),I = 1,13)
0173              L = J-1
0174              WRITE (LUT,1020)
0175              WRITE (LUT,1050) ( (GWHY (K,I),I = 1,13),K = 3,5)
0176              DO 105 K = 6,9
0177              WRITE (LUT,1100) (GWHY (K,I),I = 1,13), (GRWHYD (J,I),I = 1,6)
0178      105 J = J + 1
0179      106 GOTO (70,60,52) MODE
0180  C          DISPLAY HEADING B -> AMOUNT OF GROUNDWATER
0181      200 NN = 2
0182          J = IGRW (1) + 1
0183          L = J-1
0184              IF (.NOT.LER) GOTO 205
0185              CALL ERASE
0186              CALL HOME
0187              WRITE (LUT,999) (GWHY (1,I),I = 1,13)
0188              WRITE (LUT,1000) (GWHY (2,I),I = 1,13)
0189      205 WRITE (LUT,1020)
0190              WRITE (LUT,1050) ( (GWHY (K,I),I = 1,13),K = 10,18)
0191              DO 210 K = 20,24
0192              WRITE (LUT,1100) (SWHY (K,I),I = 1,13), (GRWHYD (J,I),I = 1,6)
0193      210 J = J + 1
0194              GOTO 106
0195  C          DISPLAY HEADING C -> SALINITY
0196      300 IF (.NOT.LER) GOTO 310
0197              CALL ERASE
0198              CALL HOME
0199      305 WRITE (LUT,999) (GWHY (1,I),I = 1,13)
0200              WRITE (LUT,1000) (GWHY (2,I),I = 1,13)
0201      310 NN = 3
0202          J = IGRW (1) + IGRW (2) + 1
0203          L = J-1
0204              WRITE (LUT,1020)
0205              WRITE (LUT,1051) CHNG (1), (SWHY (33,I),I = 3,13)
0206              WRITE (LUT,1050) (SWHY (34,I),I = 1,13)
0207              DO 315 K = 35,38
0208              WRITE (LUT,1100) (SWHY (K,I),I = 1,13), (GRWHYD (J,I),I = 1,6)
0209      315 J = J + 1
0210              GOTO 106
0211  C          DISPLAY HEADING D -> SODIUM ADSORPTION RATIO
0212      400 NN = 4
0213          J = IGRW (1) + IGRW (2) + IGRW (3) + 1
0214          L = J-1
0215              IF (.NOT.LER) GOTO 405
0216              CALL ERASE
0217              CALL HOME
0218              WRITE (LUT,999) (GWHY (1,I),I = 1,13)
0219              WRITE (LUT,1000) (GWHY (2,I),I = 1,13)
0220      405 WRITE (LUT,1020)
0221              WRITE (LUT,1051) CHNG (2), (SWHY (39,I),I = 3,13)
0222              WRITE (LUT,1050) (SWHY (40,I),I = 1,13)

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0223      DO 410 K = 41,44
0224      WRITE (LUT,1100) (SWHY (K,I),I = 1,13), (GRWHYD (J,I),I = 1,6)
0225      410 J = J + 1
0226      GOTO 106
0227  C      DISPLAY HEADING E -> ALLUVIAL VALLEY FLOOR
0228      500 NN = 5
0229      J = IGRW (1) + IGRW (2) + IGRW (3) + IGRW (3) + 1
0230      L = J-1
0231      IF (,NOT,LER) GOTO 505
0232      CALL ERASE
0233      CALL HOME
0234      WRITE (LUT,999) (GWHY (1,1),I = 1,13)
0235      WRITE (LUT,1000) (GWHY (2,I),I = 1,13)
0236      505 WRITE (LUT,1020)
0237      WRITE (LUT,1050) ( (GWHY (K,I),I = 1,13),K = 19,20)
0238      DO 510 K = 21,22
0239      WRITE (LUT,1100) (GWHY (K,I),I = 1,13), (GRWHYD (J,1),I = 1,6)
0240      510 J = J + 1
0241      GOTO 106
0242  C      USER INPUT -> MORE EDITS ?
0243      600 WRITE (LUT,3060)
0244      READ (LUT,2030) IANS
0245      IF (IANS,NE,2HYES) RETURN
0246      GOTO 1
0247  C      INPUT MODE -> DIRECT TO PROPER HEADING
0248      700 IF (NN,EQ,NGRW) RETURN
0249      GOTO (200,300,400,500) NN
0250  C      USER WANTS OUT -> SET EXIT TO ZERO AND RETURN
0251      900 EXIT = 0
0252      RETURN
0253  C      FORMAT STATEMENTS
0254      999 FORMAT ( 13A2)
0255  C
0256      1000 FORMAT (13A2,44 ('*'),/,26X,('*',
0257      &10X,'STANDARD EXPECTATIONS',11X,('*',/,
0258      &26X,44 ('*'),/,26X,('*CROP*',2X,
0259      &'NATIVE',2X,('*WILD*',2X, 'WATER',3X,
0260      &'*HIGH*OTHER*',/,26X,
0261      &'*LAND*VEGETATION*LIFE*RECREATION*USE *',5X,('*')
0262  C
0263      1020 FORMAT (70 ('*'),/,26X,('*'4X*'10X*'4X*'10X*'4X*'5X*')
0264  C
0265      1050 FORMAT (13A2,('*',4X,('*',10X,('*',4X,('*',
0266      &10X,('*',4X,('*',5X,('*')
0267  C
0268      1051 FORMAT (2X,A2,11A2,('*',4X,('*',10X,('*',4X,('*',
0269      &10X,('*',4X,('*',5X,('*')
0270  C
0271      1100 FORMAT (13A2,
0272      &'* 'I1' * 'I1' * 'I1' * 'I1' * 'I1' * 'I1' *')
0273  C
0274      1200 FORMAT (/ 'YOU HAVE TYPED IN AN ILLEGAL ANSWER.',
0275      &/, 'GIVE HER ANOTHER SHOT -> _')
0276  C
0277      2000 FORMAT ('ENTER THE APPROPRIATE',5X,
0278      &44 ('*'),/, 'NUMBER, OR ZERO TO QUIT -> _')

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0279 C
0280 1010 FORMAT ( 17X"INPUT RESPONSES/GROUND WATER HYDROLOGY"//)
0281 C
0282 2010 FORMAT ( 17X"EDIT RESPONSES/GROUND WATER HYDROLOGY"//)
0283 C
0284 3010 FORMAT ( 17X"EDIT EXPECTATIONS/GROUND WATER HYDROLOGY"//)
0285 C
0286 2020 FORMAT ( 5X"IN WHICH HEADING IS YOUR DESIRED EDIT?"/,
0287 85X" (ENTER A,B,C,D,E,OR NONE) -> _")
0288 C
0289 2030 FORMAT (A2)
0290 C
0291 2040 FORMAT ( 5X"YOUR CURRENT RESPONSE IS ->"I2,/,
0292 85X"ENTER YOUR NEW RESPONSE HERE -> _")
0293 C
0294 3020 FORMAT ( 5X"IN WHICH SUB-HEADING IS THE EXPECTATION VALUE"/,
0295 85X"YOU WISH TO CHANGE ? (ENTER THE APPROPRIATE NUMBER) -> _")
0296 C
0297 3030 FORMAT(/5X"SELECT THE LAND USE OPTION YOU WISH TO CHANGE"/
0298 > 1X" -1- / -2- / -3- / -4- / -5- / -6- /"/
0299 > 1X"CROPLAND/NAT.VEG./WILDLIFE/WAT.REC./HIGH USE/ OTHER/"
0300 >/5X"ENTER YOUR SELECTION HERE -> _")
0301 C
0302 3040 FORMAT ( 5X"ENTER YOUR NEW EXPECTATION VALUE HERE -> _")
0303 C
0304 3050 FORMAT (/, 5X"ERROR--> YOUR EXPECTATION VALUE MUST BE"/,
0305 25X"0,1,2,3, OR 4 TO AVOID INTRODUCING A BIAS -> _")
0306 C
0307 3060 FORMAT ( 5X"ANY MORE EDITS TO GROUND WATER HYDROLOGY?"/,
0308 85X" (YES OR NO) -> _")
0309 C
0310 END
0311 END$

```

&IEVS T=00004 IS ON CR00015 USING 00013 BLKS R=0000

```
0001  FTN4
0002      SUBROUTINE IEVS (ICN,IHN,IEX)
0003  C          ---INPUT EXPECTATION VALUES---
0004  C
0005  C
0006  C LEVEL 2
0007  C
0008  C      IEVS READS THE USER-INPUT, NON-STANDARD EXPECTATION VALUES
0009  C      FOR THE CURRENT CATEGORY HEADING.
0010  C
0011  C THE CALLING SEQUENCE IS :
0012  C
0013  C      CALL IEVS (ICN,IHN,IEX)
0014  C
0015  C WHERE :
0016  C
0017  C      ICN    -> CATEGORY NUMBER
0018  C      IHN    -> CATEGORY HEADING NUMBER
0019  C      IEX    -> EXIT CELL : SET TO -1 FOR RETURN
0020  C
0021  C THE LOCAL VARIABLES ARE :
0022  C
0023  C      MEV    -> MAXIMUM EXPECTATION VALUE
0024  C      IADD    -> ADDITION TO STARTING WORD IN ICOM ARRAY
0025  C      ITNS    -> TOTAL NUMBER OF SUBHEADINGS IN CATEGORY
0026  C      ISW1    -> ARRAY CONTAINING STARTING WORD OF EXPECTATION
0027  C              ARRAY IN ICOM
0028  C      ISW2    -> ARRAY CONTAINING STARTING WORD OF NUMBER OF
0029  C              SUBHEADINGS/HEADING ARRAYS IN ICOM
0030  C      ISW3    -> ARRAY CONTAINING STARTING WORD OF NUMBER
0031  C              OF HEADINGS POINTERS IN ICOM
0032  C
0033  C THIS ROUTINE WAS WRITTEN BY GREEN
0034  C
0035  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0036  C
0037  C =====
0038      COMMON ICOM (6176)
0039  C
0040      EQUIVALENCE (ICOM (46), LUT)
0041      EQUIVALENCE (ICOM (114), LUO)
0042  C
0043      INTEGER ISW1 (10), ISW2 (10), ISW3 (10)
0044  C
0045      DATA ISW1 /3859,3811,4681,4363,4021,
0046  -          4543,3907,4879,3733,4189/
0047  C
0048      DATA ISW2 /65,63,102,88,74,96,68,111,60,82/
0049  C
0050      DATA ISW3 /118,117,125,123,120,124,119,127,116,122/
0051  C
0052      MEV = 4
0053      IEX = 0
0054      IADD = 0
```



```

0055         ITNS = 0
0056 C DETERMINE TOTAL NUMBER OF SUBHEADINGS IN CATEGORY
0057         DO 3 I = 1, ICOM (ISW3 (ICN))
0058 C DETERMINE INCREMENT TO ADD TO STARTING WORD
0059         3 ITNS = ITNS + ICOM (ISW2 (ICN) + I - 1)
0060         IF (IHN .EQ. 1) GOTO 10
0061         DO 5 I = 1, IHN - 1
0062         5 IADD = IADD + ICOM (ISW2 (ICN) + I - 1)
0063 C INPUT THE EXPECTATION VALUE
0064         10 DO 20 I = 1, ICOM (ISW2 (ICN) + IHN - 1)
0065         WRITE (LUT, 1000) I
0066         15 READ (LUT, *) IEX
0067 C TEST IEX VALUE FOR VALIDITY (-1 MEANS EXIT)
0068         IF (IEX .EQ. -1) RETURN
0069         IF (IEX .GE. 0 .AND. IEX .LE. MEV) GOTO 20
0070         WRITE (LUT, 1001)
0071         GOTO 15
0072 C PUT IEX VALUE IN COMMON BLOCK AND QUIT
0073         20 ICOM (ISW1 (ICN) + (LUO - 1) * ITNS + IADD + I - 1) = IEX
0074         RETURN
0075         1000 FORMAT (1X'SUBHEADING "12" EXPECTATION VALUE (-1 TO QUIT)-> _)
0076         1001 FORMAT (1X'ERROR. EXPECTATION VALUE OUT OF BOUNDS. RE-INPUT -> _')
0077         END
0078 END$

```

&ISNEV T=00004 IS ON CR00015 USING 00056 BLKS R=0000

```
0001  FTN4
0002          SUBROUTINE ISNEV
0003  C      ---INPUT STORE NON-STANDARD EXPECTATION VALUES---
0004  C
0005  C  LEVEL 1
0006  C
0007  C  ISNEV IS ACCESSED BY CLAIM TO ALLOW USER-DESCRIBED,
0008  C  NON-STANDARD EXPECTATION OF SUCCESS VALUES TO BE :
0009  C      ** INPUT MANUALLY BY THE USER (IPNTR = 1)
0010  C      ** STORED IN A USER-NAMED FILE (IPNTR = 2)
0011  C      ** READ FROM A USER-NAMED FILE (IPNTR = 3)
0012  C
0013  C  ALL FILES CONTAIN THE CHARACTERS "##" IN THE FIRST WORD OF THE ID
0014  C  SEGMENT
0015  C
0016  C  THE CALLING SEQUENCE IS:      CALL ISNEV
0017  C
0018  C  ISNEV CALLS SUBROUTINE IEVS TO INPUT AN EXPECTATION VALUE
0019  C
0020  C  ISNEV USES THE TCS ROUTINES: ERASE AND HOME, AND
0021  C  CALLS THE SYSTEM ROUTINE : SPOLU.
0022  C
0023  C  ISNEV DECLARES LABEL COMMON ALTRN AND CTIL
0024  C
0025  C  THE LOCAL VARIABLES ARE:
0026  C
0027  C      FILID - ID SEGMENT FOR EXPECTATION FILE (INTEGER)
0028  C      IANS  - ANSWER CELL
0029  C      ICN   - CATEGORY NUMBER
0030  C      IEX   - EXIT CELL
0031  C      IHEAD - HEADING LETTER ARRAY
0032  C      IHL   - HEADING LETTER
0033  C      IHN   - HEADING NUMBER
0034  C      IPTR  - LOCAL POINTER
0035  C
0036  C  THIS ROUTINE WAS WRITTEN BY GREEN
0037  C
0038  C  ***** CLAIM RELEASE 1.0, APRIL 1, 1980 *****
0039  C  =====
0040  C
0041  C      TEKTRONIX COMMON
0042  C
0043  C      COMMON ITEK (45)
0044  C
0045  C      LOGICAL UNITS AND COMMON LOCATION
0046  C
0047  C      COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0048  C
0049  C      POINTERS
0050  C
0051  C      COMMON EXIT      ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0052  C      COMMON IOPTN     ,IOVR(7),IPNTR ,ISOC(6),ISUB(8)
0053  C      COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT ,LUO
0054  C      COMMON MODE      ,NANM ,NCLI ,NGEN ,NGRW
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0055      COMMON NOVR      ,NSECTS ,NSOC      ,NSUB      ,NSUR
0056      COMMON NTOP      ,NU          ,NVEG
0057  C
0058  C      GRADING PARAMETERS
0059  C
0060      COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCPA(5)
0061      COMMON GRDVB(5),HMHT(5,10),HWSLI(5,10),NSPF(5),PCEQ19(4)
0062      COMMON PERCNT(5,10),REHCPY(5),REHVOL(5),SLOPE(5,10),WBP
0063  C
0064  C      CATEGORY TEXT
0065  C
0066      COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0067      COMMON OVRBD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0068      COMMON TPSL(49,13),VGTA(15,13)
0069  C
0070  C      EXPECTATION VALUES
0071  C
0072      COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0073      COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0074      COMMON TOPSOI(33,6),VEGETA(10,6)
0075  C
0076  C      CATEGORY RESPONSES
0077  C
0078      COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0079      COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0080      COMMON RTOPSO(9),RVEGET(2)
0081  C
0082  C      FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0083  C
0084      COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHM
0085      COMMON CABS(2),CAC,CACF,CADF,CADH
0086      COMMON CAUS,CAEAF,CAHSAP,CAHSTS,CAIP
0087      COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0088      COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0089      COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0090  C
0091      INTEGER EXIT,CLMA,GDES,GWHY,OVRBD,SBSL
0092      INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0093      INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0094      INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0095      INTEGER VEGETA,ANIMAL
0096      INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0097      INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0098      INTEGER RCLTEC,TTL
0099  C
0100      INTEGER COMMON (1)
0101      EQUIVALENCE (COMMON (1), ITEK (1))
0102      EQUIVALENCE (IARY1 (1), LUT)
0103      EQUIVALENCE (IARY2 (1), ISTRK)
0104      EQUIVALENCE (IARY2 (2), ISECT)
0105      EQUIVALENCE (IARY2 (3), ICODE)
0106      EQUIVALENCE (IARY2 (4), LEN)
0107  C
0108      LOGICAL LER
0109  C
0110      COMMON /ALTRN/ ALTN

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0111      COMMON /CTIL/  ICAT
0112      INTEGER ALTN (6,4), ICAT (10,12), IHEAD (9), FILID (3)
0113      DATA IHEAD /2HA ,2HB ,2HC ,2HD ,2HE ,2HF ,2HG ,2HH ,2HI /
0114      DATA ICR/15/
0115  C
0116  C          SET FIRST WORD OF ID SEGMENT
0117      FILID (1) = 2H#$
0118          IF (IPNTR .EQ. 1) 100, 500
0119  C          USER INPUT OF NON-STANDARD EXPECTATION VALUES
0120  C          GET THE CATEGORY
0121      100 IFTR = 1
0122          IF (LER) CALL ERASE
0123          IF (LER) CALL HOME
0124      WRITE (LUT, 1000)
0125      105 READ (LUT, *) ICN
0126          IF (ICN .EQ. -1) 110, 115
0127  C          ICN = -1 => INPUT THE "OTHER" ALTERNATIVE
0128  C          SET IFTR TO 2 AND LUO TO 6
0129      110 IFTR = 2
0130          LUO = 6
0131      GOTO 200
0132  C          TEST ICN FOR VALIDITY ** ZERO MEANS QUIT
0133      115 IF (ICN .EQ. 0) RETURN
0134          IF (ICN .GE. 1 .AND. ICN .LE. NSECTS) GOTO 120
0135      WRITE (LUT, 1001)
0136      GOTO 105
0137  C          GET THE CATEGORY HEADING
0138      120 WRITE (LUT, 1002)
0139      125 READ (LUT, 1003) IHL
0140          IHN = 0
0141          DO 126 K = 1,9
0142              IF (IHL .EQ. IHEAD (K)) IHN = K
0143      126 CONTINUE
0144          IF (IHL .EQ. 2HNO) GOTO 100
0145          IF (IHN .EQ. 0) GOTO 150
0146  C          GET THE LAND USE OPTION REFERENCE NUMBER
0147      130 WRITE (LUT, 1004)
0148          DO 135 I = 1, 6
0149      135 WRITE (LUT, 1005) I, (ALTN (I, J), J = 1, 4)
0150      WRITE (LUT, 1006)
0151      140 READ (LUT, *) LUO
0152          IF (LUO .EQ. 0) GOTO 120
0153          IF (LUO .GE. 1 .AND. LUO .LE. 6) GOTO 160
0154      WRITE (LUT, 1001)
0155      GOTO 140
0156  C          ERROR -> INVALID HEADING NUMBER
0157      150 WRITE (LUT, 1011)
0158      GOTO 120
0159  C          SHOW USER CURRENT STATUS
0160      160 IF (LER) CALL ERASE
0161          IF (LER) CALL HOME
0162      WRITE (LUT, 1007) (ICAT (ICN, J), J = 1, 12),
0163      > IHEAD (IHN), (ALTN (LUO, K), K = 1, 4)
0164      GOTO (210, 230, 250, 270, 290, 310, 330, 350, 370, 390) ICN
0165  C          GENERAL DESCRIPTION CATEGORY
0166      200 ICN = ICN + 2

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0167      IHN = 0
0168      205 IHN = IHN + 1
0169          IF (IHN .LE. NGEN) GOTO 160
0170      210      IF (IHN .GT. NGEN) GOTO (150, 220) IFTR
0171          CALL IEVS (ICN,IHN,IEX)
0172          IF (IEX .EQ. -1) GOTO 100
0173          IF (IFTR .EQ. 1) 130, 205
0174      C          CLIMATOLOGY CATEGORY
0175      220 ICN = ICN + 1
0176          IHN = 0
0177      225 IHN = IHN + 1
0178          IF (IHN .LE. NCLI) GOTO 160
0179      230      IF (IHN .GT. NCLI) GOTO (150, 240) IFTR
0180          CALL IEVS (ICN,IHN,IEX)
0181          IF (IEX .EQ. -1) GOTO 100
0182          IF (IFTR .EQ. 1) 130, 225
0183      C          TOPSOIL CATEGORY
0184      240 ICN = ICN + 1
0185          IHN = 0
0186      245 IHN = IHN + 1
0187          IF (IHN .LE. NTOP) GOTO 160
0188      250      IF (IHN .GT. NTOP) GOTO (150, 260) IFTR
0189          CALL IEVS (ICN,IHN,IEX)
0190          IF (IEX .EQ. -1) GOTO 100
0191          IF (IFTR .EQ. 1) 130, 245
0192      C          SUBSOIL CATEGORY
0193      260 ICN = ICN + 1
0194          IHN = 0
0195      265 IHN = IHN + 1
0196          IF (IHN .LE. NSUB) GOTO 160
0197      270      IF (IHN .GT. NSUB) GOTO (150, 280) IFTR
0198          CALL IEVS (ICN,IHN,IEX)
0199          IF (IEX .EQ. -1) GOTO 100
0200          IF (IFTR .EQ. 1) 130, 265
0201      C          OVERBURDEN CATEGORY
0202      280 ICN = ICN + 1
0203          IHN = 0
0204      285 IHN = IHN + 1
0205          IF (IHN .LE. NOVR) GOTO 160
0206      290      IF (IHN .GT. NOVR) GOTO (150, 300) IFTR
0207          CALL IEVS (ICN,IHN,IEX)
0208          IF (IEX .EQ. -1) GOTO 100
0209          IF (IFTR .EQ. 1) 130, 285
0210      C          SURFACE WATER HYDROLOGY CATEGORY
0211      300 ICN = ICN + 1
0212          IHN = 0
0213      305 IHN = IHN + 1
0214          IF (IHN .LE. NSUR) GOTO 160
0215      310      IF (IHN .GT. NSUR) GOTO (150, 320) IFTR
0216          CALL IEVS (ICN,IHN,IEX)
0217          IF (IEX .EQ. -1) GOTO 100
0218          IF (IFTR .EQ. 1) 130, 305
0219      C          GROUND WATER HYDROLOGY
0220      320 ICN = ICN + 1
0221          IHN = 0
0222      325 IHN = IHN + 1

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0223          IF (IHN .LE. NGRW) GOTO 160
0224      330      IF (IHN .GT. NGRW) GOTO (150, 340) IFTR
0225          CALL IEVS (ICN,IHN,IEX)
0226          IF (IEX .EQ. -1) GOTO 100
0227          IF (IFTR .EQ. 1) 130, 325
0228      C          VEGETATION
0229      340      ICN = ICN + 1
0230          IHN = 0
0231      345      IHN = IHN + 1
0232          IF (IHN .LE. NVEG) GOTO 160
0233      350      IF (IHN .GT. NVEG) GOTO (150, 360) IFTR
0234          CALL IEVS (ICN,IHN,IEX)
0235          IF (IEX .EQ. -1) GOTO 100
0236          IF (IFTR .EQ. 1) 130, 345
0237      C          ANIMALS CATEGORY
0238      360      ICN = ICN + 1
0239          IHN = 0
0240      365      IHN = IHN + 1
0241          IF (IHN .LE. NANM) GOTO 160
0242      370      IF (IHN .GT. NANM) GOTO (150, 380) IFTR
0243          CALL IEVS (ICN,IHN,IEX)
0244          IF (IEX .EQ. -1) GOTO 100
0245          IF (IFTR .EQ. 1) 130, 365
0246      C          SOCIO-ECONOMICS CATEGORY
0247      380      ICN = ICN + 1
0248          IHN = 0
0249      385      IHN = IHN + 1
0250          IF (IHN .LE. NSOC) GOTO 160
0251      390      IF (IHN .GT. NSOC) GOTO (150, 100) IFTR
0252          CALL IEVS (ICN,IHN,IEX)
0253          IF (IEX .EQ. -1) GOTO 100
0254          IF (IFTR .EQ. 1) 130, 385
0255      C          STORE EXPECTATION VALUES ** CURRENTLY, EXPECTATION
0256      C          VALUES USE WORDS 3733 - 4938 OF THE CLAIM COMMON BLOCK
0257      500      IF (LER) CALL ERASE
0258          IF (LER) CALL HOME
0259          IF (IPNTR .EQ. 2) WRITE (LUT,1012)
0260          IF (IPNTR .EQ. 3) WRITE (LUT,1013)
0261          WRITE (LUT, 1008)
0262          READ (LUT, 1009) (FILID (J),J = 2,3)
0263      C          DOES THE FILE EXIST ?
0264          CALL SPOLU (LUF,FILID,2,1,ICR)
0265          IF (LUF .EQ. -6) GOTO (511, 520) IPNTR - 1
0266          IF (LUF .LT. 0) STOP 1
0267      C          THE FILE HAS BEEN SUCCESSFULLY OPENED. IF THE
0268      C          USER IS STORING DATA, MAKE SURE THAT HE WANTS
0269      C          TO PURGE THE EXISTING FILE. IF THE USER IS
0270      C          RETRIEVING DATA, WE'RE OK.
0271          READ (LUF, 1014) TTL
0272          IF (IPNTR .EQ. 3) GOTO 550
0273          WRITE (LUT, 1015) (FILID (J), J=2,3) , TTL
0274      505      READ (LUT, 1003) IANS
0275          IF (IANS .EQ. 2HYE) GOTO 510
0276          IF (IANS .EQ. 2HNO) GOTO 515
0277          WRITE (LUT, 1017) IANS
0278          GOTO 505

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0279 C          PURGE THE EXISTING FILE.
0280 510 CALL SPOLU (LUF,FILID,2,3,ICR)
0281      IF (LUF .LT. 0) STOP 2
0282 C          OPEN THE FILE IN THE WRITE MODE,
0283 C          AND BRANCH TO DATA STORAGE CODE.
0284 511 CALL SPOLU (LUF,FILID,3,1,ICR)
0285      IF (LUF .LT. 0) STOP 3
0286      GOTO 530
0287 C          CLOSE THE FILE. IF THE USER WANTS
0288 C          TO INPUT A NEW FILE NAME, START OVER *
0289 C          OTHERWISE, RETURN
0290 515 CALL SPOLU (LUF,FILID,2,2,ICR)
0291      IF (LUF .LT. 0) STOP 4
0292 516 WRITE (LUT, 1018)
0293 517 READ  (LUT, 1003) IANS
0294      IF (IANS .EQ. 2HYES) GOTO 500
0295      IF (IANS .EQ. 2HNO) RETURN
0296      WRITE (LUT, 1017) IANS
0297      GOTO 517
0298 C          USER IS RETRIEVING AND THE FILE IS NON-EXISTENT.
0299 C          GIVE MESSAGE, AND ALLOW THE USER TO RE-INPUT
0300 C          THE FILE NAME.
0301 520 WRITE (LUT, 1019) (FILID (J), J=2,3)
0302      GOTO 516
0303 C          STORE THE VALUES
0304 530 WRITE (LUT, 1020)
0305      READ  (LUT, 1014) TTL
0306      WRITE (LUF, 1014) TTL
0307      DO 535 I = 3733, 4938 , 6
0308 535 WRITE (LUF, 1010) (COMMON (J), J = I, I + 5)
0309 C          CLOSE FILID AND RETURN
0310      CALL SPOLU (LUF,FILID,3,2,ICR)
0311      IF (LUF .LT. 0) STOP 5
0312      RETURN
0313 C          RETRIEVING
0314 550 WRITE (LUT, 1021) (FILID (J), J=2,3), TTL
0315      DO 560 I = 3733, 4938, 6
0316 560 READ (LUF, 1010) (COMMON (J), J = I, I + 5)
0317 C          READ SUCCESSFUL ** CLOSE FILID AND RETURN
0318      CALL SPOLU (LUF,FILID,2,2,ICR)
0319      IF(LEI) CALL TINPT(IANS)
0320      IF(LEI) CALL BELL
0321      RETURN
0322 C          FORMAT STATEMENTS
0323 1000 FORMAT (5X'*** NON-STANDARD EXPECTATION VALUES ***'//
0324      > 5X' -1 -> INPUT OTHER OPTION FOR ALL CATEGORIES'//
0325      > 5X'      (STARTING WITH CATEGORY 1)'//
0326      > 5X' 0 -> EXIT FROM THIS ROUTINE'//,
0327      > 5X' 1 -> GENERAL DESCRIPTION CATEGORY'//,
0328      > 5X' 2 -> CLIMATOLOGY CATEGORY'//,
0329      > 5X' 3 -> TOPSOIL CATEGORY'//,
0330      > 5X' 4 -> SUBSOIL CATEGORY'//,
0331      > 5X' 5 -> OVERBURDEN CATEGORY'//,
0332      > 5X' 6 -> SURFACE WATER HYDROLOGY CATEGORY'//,
0333      > 5X' 7 -> GROUND WATER HYDROLOGY CATEGORY'//,
0334      > 5X' 8 -> VEGETATION CATEGORY'//,

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0335      > 5X" 9 -> ANIMALS CATEGORY"/,
0336      > 5X" 10 -> SOCIO-ECONOMICS CATEGORY"/,
0337      > 5X"INPUT --> _")
0338 C
0339 1001 FORMAT (5X"**ERROR** ILLEGAL ENTRY. RE-INPUT -> _")
0340 C
0341 1002 FORMAT (5X"INPUT THE HEADING LETTER (NONE TO EXIT) -> _")
0342 C
0343 1003 FORMAT (A2)
0344 C
0345 1004 FORMAT (5X"LAND USE OPTION :")
0346 C
0347 1005 FORMAT (5X,I2" -> "4A2)
0348 C
0349 1006 FORMAT (5X"INPUT REFERENCE NUMBER (0 TO EXIT) -> _")
0350 C
0351 1007 FORMAT (5X" CURRENT CATEGORY IS -> "12A2,/
0352      >      5X" CURRENT HEADING IS -> "A2,/
0353      >      5X" CURRENT LAND USE OPTION IS ->"4A2,/
0354      >      5X" -----"/)
0355 C
0356 1008 FORMAT(/,5X"INPUT THE FILE NAME -> _")
0357 1009 FORMAT (2A2)
0358 C
0359 1010 FORMAT (6I1)
0360 C
0361 1011 FORMAT(/,5X"ERROR** ILLEGAL HEADING LETTER SPECIFIED.")
0362 C
0363 1012 FORMAT (5X"DATA STORAGE"/
0364      >      5X"NON-STANDARD EXPECTATION VALUES"/
0365      >      5X"-----"///)
0366 1013 FORMAT (5X"DATA RETRIEVAL"/
0367      >      5X"NON-STANDARD EXPECTATION VALUES"/
0368      >      5X"-----"///)
0369 1014 FORMAT (40A2)
0370 1015 FORMAT (5X,"THE FILE '"2A2"' ALREADY EXISTS."//
0371      > 5X,"THE TITLE IS :",/,5X,40A2,/,
0372      > 5X,"DO YOU WANT TO WRITE OVER THIS FILE ?"/
0373      > 5X,"(YES OR NO) -> _")
0374 1017 FORMAT (1X,A2,"?? <ERROR> RE-ENTER YOUR RESPONSE -> _")
0375 1018 FORMAT (5X,"DO YOU WANT TO RE-ENTER THE FILE NAME ?"/
0376      >      5X,"ENTER YES OR NO -> _")
0377 1019 FORMAT (5X,"THE FILE '"2A2"' DOES NOT EXIST."//)
0378 1020 FORMAT(5X,"INPUT THE TITLE ASSOCIATED WITH THIS"/
0379      > 5X"FILE->_")
0380 1021 FORMAT(/,5X"RETRIEVING DATA FROM : "2A2,/,
0381      >5X"TITLE-> "40A2,
0382      >///,1X,"HIT THE RETURN KEY TO CONTINUE..._")
0383      END
0384      END$

```



&MNMXF T=00004 IS ON CRO0015 USING 00012 BLKS R=0063

```
0001  FTN4
0002      SUBROUTINE MNMXF (LUT,MODE,KCUT,GRDVBS,TSMAX,TSMIN,KCODE)
0003  C --- MINIMUM AND MAXIMUM FINAL SLOPE VALUES ---
0004  C
0005  C LEVEL 5
0006  C
0007  C SUBROUTINE MNMXF IS ACCESSED BY BUILD AND DLISP TO RETURN
0008  C THE MAXIMUM AND MINIMUM FINAL SLOPE VALUES
0009  C
0010  C THE CALLING SEQUENCE IS :
0011  C
0012  C      CALL MNMXF (LUT,MODE,KCUT,GRDVBS,TSMAX,TSMIN,KCODE)
0013  C
0014  C WHERE
0015  C
0016  C      LUT IS THE LOGICAL UNIT OF THE USER'S TERMINAL
0017  C      MODE IS THE MODE INDICATOR (AS DEFINED IN CLAIM COMMON)
0018  C      KCUT IS THE CUT OPTION (AS DEFINED BY RGENDE(2) IN CLAIM COMMON)
0019  C      GRDVBS IS THE GRADING VARIABLES ARRAY (AS DEFINED BY CLAIM COMMON)
0020  C      TSMAX IS THE MAXIMUM FINAL SLOPE VALUE
0021  C      TSMIN IS THE MINIMUM FINAL SLOPE VALUE
0022  C      KCODE IS A SWITCH WHERE:
0023  C          1 -> READ TSMAX ,TSMIN FROM USER
0024  C          2 -> RETURN TSMAX, TSMIN DIRECTLY
0025  C          3 -> MIN AND MAX ARE EQUAL
0026  C
0027  C THIS ROUTINE WAS WRITTEN BY GREEN
0028  C
0029  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0030  C
0031      DIMENSION GRDVBS(5)
0032  C
0033  C          DETERMINE MINIMUM PERMISSABLE FINAL SLOPE VALUE
0034      TSMIN = AMAX1(11.,GRDVBS(4))
0035      IF(KCUT.EQ.2) TSMIN = GRDVBS(4)
0036      IF(KCUT.EQ.1.AND.MODE.EQ.4) TSMIN = GRDVBS(4)
0037      IF(KCUT.EQ.3.AND.MODE.EQ.4) TSMIN = 0.1
0038      IF(KCUT.EQ.3.AND.MODE.NE.4) TSMIN = 11.
0039  C          DETERMINE MAXIMUM PERMISSABLE FINAL SLOPE VALUE
0040      IF(MODE.EQ.4) 10,20
0041      10 TSMAX = GRDVBS(2)
0042      IF(KCUT.EQ.3) TSMAX = AMIN1(GRDVBS(4),GRDVBS(5))
0043  C          MAKE SURE THAT THE FINAL MINIMUM SLOPE VALUE FOR
0044  C          THE FINAL CUT OPTION IS LEGAL
0045      IF(KCUT.EQ.3.AND.TSMIN.GT.TSMAX) TSMIN=TSMAX
0046      GOTO 30
0047      20 TSMAX = AMIN1(19.,GRDVBS(2))
0048      IF(KCUT.EQ.3) TSMAX = AMIN1(19.,GRDVBS(4),GRDVBS(5))
0049  C          READ THE USER'S REQUESTED LIMITS (OR RETURN)
0050      30 IF(TSMIN.EQ.TSMAX) GOTO 35
0051      IF(KCODE.EQ.2) RETURN
0052      WRITE(LUT,1000) TSMIN,TSMAX
0053      READ(LUT,*) TSMIN1,TSMAX1
0054  C          TEST ALL POSSIBILITIES
```



```

0055         IF(
0056         > TSMIN1.LT.TSMIN      .OR.
0057         > TSMIN1.GE.TSMAX1     .OR.
0058         > TSMIN1.GE.TSMAX      .OR.
0059         > TSMAX1.GT.TSMAX )    GOTO 30
0060         TSMIN = TSMIN1
0061         TSMAX = TSMAX1
0062         RETURN
0063 C           MAXIMUM AND MINIMUM SLOPES ARE THE SAME. SET KCODE
0064 C           AND TELL USER
0065         35 KCODE=3
0066         WRITE(LUT,36)
0067         RETURN
0068 C           FORMAT STATEMENTS
0069         1000 FORMAT(//5X"THE LOWER AND UPPER FINAL SLOPE LIMITS ARE :"/
0070         >          5X" -- LOWER ="F5.1" DEGREES"
0071         >/         5X" -- UPPER ="F5.1" DEGREES"//
0072         >          5X"INPUT THE LOWER LIMIT, FOLLOWED BY A COMMA, "/
0073         >          5X"THEN THE UPPER LIMIT THAT YOU WISH TO VIEW -> _")
0074 C
0075         36 FORMAT(//5X"THE LOWER AND UPPER FINAL SLOPE LIMITS ARE"
0076         > /         5X"EQUAL. NO GRAPHS OR TABLES ARE AVAILABLE")
0077         END
0078     END$

```

&OPUSE T=00004 IS ON CR00015 USING 00024 BLKS R=0000

```
0001  FTN4
0002  C ===== SUBROUTINE  OPUSE =====
0003  C =
0004  C = OPTIMUM USE FACTORS
0005  C =
0006  C = SOURCE FILE : &OPUSE OBJECT FILE : &OPUSE =
0007  C =====
0008  C
0009  C
0010  C DESCRIPTION:
0011  C
0012  C OPUSE DETERMINES THE OPTIMUM USE FACTORS FOR THE CURRENT DATA,
0013  C AND DISPLAYS THESE VALUES ALONG WITH THE FEASIBILITY RANKINGS
0014  C AND TOTAL COST FOR RECLAMATION. ALL VALUES ARE RANKED FROM
0015  C BEST TO WORST.
0016  C OPUSE IS SCHEDULED THROUGH CLAIM SWAP CONTROL VIA PROGRAM OPUSX
0017  C
0018  C CALLING SEQUENCE:
0019  C
0020  C CALL OPUSE
0021  C
0022  C ARGUMENTS: NONE
0023  C
0024  C ACCESSED BY:
0025  C CLAIM
0026  C RCLAM (SEAMPLAN)
0027  C
0028  C SUBROUTINES SCHEDULED:
0029  C
0030  C BELL (TCS)
0031  C ERASE (TCS)
0032  C HOME (TCS)
0033  C TINPT (TCS)
0034  C
0035  C LOCAL VARIABLES:
0036  C
0037  C AVGR - FEASIBILITY RANKINGS
0038  C EKON - TOTAL RECLAMATION COSTS
0039  C OPTM - OPTIMUM USE FACTORS
0040  C IANS - ANSWER CELL
0041  C
0042  C
0043  C AUTHOR: ORVILLE D. GREEN
0044  C
0045  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0046  C
0047  C
0048  C =====
0049  C
0050  C
0051  C SUBROUTINE OPUSE
0052  C
0053  C
0054  C TEKTRONIX COMMON
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```

0055 C
0056 COMMON ITER (45)
0057 C
0058 C LOGICAL UNITS AND COMMON LOCATION
0059 C
0060 COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0061 C
0062 C POINTERS
0063 C
0064 COMMON EXIT ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0065 COMMON IOPTN ,IOVR(7),IPNTR ,ISOC(6),ISUB(8)
0066 COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT ,LUO
0067 COMMON MODE ,NANM ,NCLI ,NGEN ,NGRW
0068 COMMON NOVR ,NSECTS ,NSOC ,NSUB ,NSUR
0069 COMMON NTOP ,NU ,NVEG
0070 C
0071 C GRADING PARAMETERS
0072 C
0073 COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCPA(5)
0074 COMMON GRDVBS(5),HWHT(5,10),HWSLI(5,10),NSFP(5),PCER19(4)
0075 COMMON PERCNT(5,10),REHCPY(5),REHVOL(5),SLOPE(5,10),MBP
0076 C
0077 C CATEGORY TEXT
0078 C
0079 COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GMHY(22,13)
0080 COMMON OVRBD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0081 COMMON TPSL(49,13),VGTA(15,13)
0082 C
0083 C EXPECTATION VALUES
0084 C
0085 COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0086 COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0087 COMMON TOPSOI(33,6),VEGETA(10,6)
0088 C
0089 C CATEGORY RESPONSES
0090 C
0091 COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0092 COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0093 COMMON RTOPSO(9),RVEGET(2)
0094 C
0095 C FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0096 C
0097 COMMON CAAHM,CABAH,CABFN(3),CABFF(3),CABHM
0098 COMMON CABS(2),CAC,CACP,CAUF,CADH
0099 COMMON CADS,CAEAF,CAHSAF,CAHSTS,CAIF
0100 COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0101 COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0102 COMMON TCAR(5),THICK(10),THKYS,TTL(40)
0103 C
0104 INTEGER EXIT,CLMA,GDES,GMHY,OVRBD,SBSL
0105 INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0106 INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0107 INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0108 INTEGER VEGETA,ANIMAL
0109 INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0110 INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA

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```

0111      INTEGER RCLTEC,TTL
0112  C
0113      INTEGER COMMON (1)
0114      EQUIVALENCE (COMMON (1), ITEK (1))
0115      EQUIVALENCE (IARRY (1), LUT)
0116      EQUIVALENCE (IARY2 (1), ISTRK)
0117      EQUIVALENCE (IARY2 (2), ISECT)
0118      EQUIVALENCE (IARY2 (3), ICODE)
0119      EQUIVALENCE (IARY2 (4), LEN)
0120  C
0121      LOGICAL LER
0122      DIMENSION OPTM(5),EKON(5),AVGR(5)
0123      INTEGER ALTN (6,4)
0124      COMMON /ALTRN/ ALTN
0125  C
0126  C      FILL DUMMY ARRAYS
0127  C
0128      IF(LER) CALL ERASE
0129      IF(LER) CALL HOME
0130      DO 5 I=1,5
0131      AVGR(I) = FAVG(I)
0132      5 EKON(I) = TCAR(I)
0133  C
0134  C      FIGURE THE OPTIMUM USE FACTORS
0135  C
0136      DO 10 I=1,5
0137      IF(EKON(I).LE.0.) GOTO 9
0138      OPTM(I) = FAVG(I) * 1000. / EKON(I)
0139      GOTO 10
0140      9 AVGR(I) = -1.
0141      OPTM(I) = -1.
0142      EKON(I) = 1001100.
0143      10 CONTINUE
0144  C
0145  C NOW PRINT IT OUT ** I:FEASI*K:TECON*L:OPUSE
0146  C
0147      WRITE(LUL,34) TTL
0148      N=0
0149      NN = 0
0150      13 N=N+1
0151      AM1 = AMAX1(AVGR(1),AVGR(2),AVGR(3),AVGR(4),AVGR(5))
0152      AM2 = AMIN1(EKON(1),EKON(2),EKON(3),EKON(4),EKON(5))
0153      AM3 = AMAX1(OPTM(1),OPTM(2),OPTM(3),OPTM(4),OPTM(5))
0154      DO 20 J=1,5
0155      IF(AM1.EQ.AVGR(J)) 15,20
0156      15 AVGR(J) = -1.
0157      I=J
0158      GOTO 21
0159      20 CONTINUE
0160      21 DO 25 J=1,5
0161      IF(AM3.EQ.OPTM(J)) 22,25
0162      22 OPTM(J) = -1.
0163      L=J
0164      GOTO 26
0165      25 CONTINUE
0166      26 DO 30 J=1,5

```

```

0167      IF(AM2.EQ.EKON(J)) 27,30
0168 27 EKON(J) = +1001100.
0169      K=J
0170      GOTO 31
0171 30 CONTINUE
0172 31 IF(AM2.EQ.1001100.) GOTO 40
0173      NN = NN + 1
0174      WRITE(LUL,35)NN,(ALTN(I,J),J=1,4),AM1,
0175      * NN,(ALTN(K,J),J=1,4),AM2,NN,(ALTN(L,J),J=1,4),AM3
0176      IF(N.GE.5) GOTO 40
0177      GOTO 13
0178 C
0179 34 FORMAT(1H1,1X,40A2,/,15X"*** COMPARISONS AND OPTIMUM"1X
0180      *"USE FACTORS ***",
0181      *3/,5X"FEASIBILITY RANKING" 8X"COST PER ACRE" 9X"OPTIMUM USE"/,
0182      *5X"-----" 8X"-----" 9X"-----"/)
0183 C
0184 35 FORMAT(1X,11"), "4A2,F10.3,3X,I1"), "4A2,F10.2,4X,
0185      *I1"), "4A2,F10.5)
0186 C
0187 40 IF(LUL.NE.LUT.OR..NOT.LER) RETURN
0188      WRITE(LUT,45)
0189 45 FORMAT(5X"HIT THE RETURN KEY TO CONTINUE :_")
0190      CALL BELL
0191      CALL TINPT(IANS)
0192      IF ( IARRY(2) .NE. 3 ) CALL ERASE
0193      CALL HOME
0194      RETURN
0195      END
0196      END$

```

80VRED T=00004 IS ON CR00015 USING 00067 BLKS R=0000

```
0001  FTN4
0002                      SUBROUTINE OVRED
0003  C      FULL DISPLAY--CATEGORY 5 / OVERBURDEN
0004  C
0005  C  LEVEL 2
0006  C
0007  C  OVRED IS ACCESSED BY EIFD TO SCHEDULE USER INPUTS AND
0008  C  EDITS TO CATEGORY RESPONSES, AND USER EDITS TO EXPECTATION
0009  C  OF SUCCESS VALUES FOR CATEGORY 5 - OVERBURDEN, USING FULL
0010  C  DISPLAY.
0011  C
0012  C  THE METHOD HERE DIFFERS SOMEWHAT FROM THE GENERAL "FULL DISPLAY"
0013  C  METHODOLOGY EMPLOYED BY THE OTHER ENVIRONMENTAL CATEGORIES IN
0014  C  THAT UP TO 10 SETS OF RESPONSES MAY BE DEFINED.  THUS, THE "EDIT
0015  C  RESPONSE" MODE REQUIRES THAT THE USER SPECIFY THE LITHOLOGIC
0016  C  UNIT NUMBER OF HIS EDIT -- IN ADDITION, THE USER HAS THE OPTION
0017  C  OF ADDING TO OR SUBTRACTING FROM THE LAST LITHOLOGIC UNIT
0018  C  ENTERED (PROVIDED, OF COURSE, THAT THE NUMBER IS NOT
0019  C  GREATER THAN 10 OR LESS THAN 1).
0020  C
0021  C  THE "INPUT MODE" REQUIRES THAT THE "LEXIT" POINTER BE
0022  C  CHECKED - IF ONE, WE START AT THE FIRST LITHOLOGIC UNIT,
0023  C  OTHERWISE, THE CURRENT LITHOLOGIC UNIT NUMBER IS USED.
0024  C
0025  C
0026  C  THE CALLING SEQUENCE IS :          CALL OVRED
0027  C
0028  C  OVRED USES THE TCS ROUTINES : BELL,ERASE,HOME, AND TINPT
0029  C
0030  C  THE LOCAL VARIABLES ARE :
0031  C
0032  C      CHNG    -> ARRAY CONTAINING HEADING LETTER CHANGES
0033  C      IADD    -> SET TO ONE IF USER WANTS TO ADD A LITHOLOGIC
0034  C              UNIT DURING EDIT MODE
0035  C      IANS    -> ANSWER CELL
0036  C      ICHAR    -> TINPT RETURN CELL
0037  C      II      -> "I" INDEX [ (I,J) ] TO OVREDN ARRAY
0038  C      IOLD    -> PRE-EDIT CATEGORY RESPONSE VALUE
0039  C      LUORN   -> LAND USE OPTION REFERENCE NUMBER
0040  C              1-> CROPLAND
0041  C              2-> NATIVE VEGETATION
0042  C              3-> WILDLIFE
0043  C              4-> WATER RECREATION
0044  C              5-> HIGH USE
0045  C              6-> OTHER
0046  C      NN      -> HEADING NUMBER
0047  C      NO      -> CURRENT LITHOLOGIC UNIT NUMBER
0048  C      NEXT    -> NEXT LITHOLOGIC UNIT NUMBER
0049  C
0050  C  OVRED IS SWAPPED IN BY PROGRAM OVREBX
0051  C
0052  C  THIS ROUTINE WAS WRITTEN BY GREEN
0053  C
0054  C  ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
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0055 C =====
0056 C
0057 C     TEKTRONIX COMMON
0058 C
0059 C     COMMON ITEK (45)
0060 C
0061 C     LOGICAL UNITS AND COMMON LOCATION
0062 C
0063 C     COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0064 C
0065 C     POINTERS
0066 C
0067 C     COMMON EXIT      ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0068 C     COMMON IOPTN    ,IOVR(7),IPNTR ,ISOC(6),ISUB(8)
0069 C     COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT ,LUD
0070 C     COMMON MODE     ,NANH ,NCLI ,NGEN ,NGRW
0071 C     COMMON NOVR     ,NSECTS ,NSOC ,NSUB ,NSUR
0072 C     COMMON NTOP     ,NU ,NVEG
0073 C
0074 C     GRADING PARAMETERS
0075 C
0076 C     COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCPA(5)
0077 C     COMMON GROVBS(5),HWHT(5,10),HWSLI(5,10),NSPP(5),PCEQ19(4)
0078 C     COMMON PERCNT(5,10),REHCPY(5),REHVOL(5),SLOPE(5,10),WBP
0079 C
0080 C     CATEGORY TEXT
0081 C
0082 C     COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0083 C     COMMON OVBD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0084 C     COMMON TPST(49,13),VGTA(15,13)
0085 C
0086 C     EXPECTATION VALUES
0087 C
0088 C     COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0089 C     COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0090 C     COMMON TOPSOI(33,6),VEGETA(10,6)
0091 C
0092 C     CATEGORY RESPONSES
0093 C
0094 C     COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0095 C     COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0096 C     COMMON RTOPSO(9),RVEGET(2)
0097 C
0098 C     FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0099 C
0100 C     COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CAHBM
0101 C     COMMON CABS(2),CAC,CACP,CADF,CADH
0102 C     COMMON CADS,CAEAF,CAHSAF,CAHSTS,CAIP
0103 C     COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0104 C     COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0105 C     COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0106 C
0107 C     INTEGER EXIT,CLMA,GDES,GWHY,OVBD,SBSL
0108 C     INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0109 C     INTEGER CLIMAT,GENDES,GRWHYD,OVBRDN
0110 C     INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI

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0111      INTEGER VEGETA,ANIMAL
0112      INTEGER RCLIMA,RGENDE,RGRWHY,ROVRED,RSOCEC
0113      INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0114      INTEGER RCLTEC,TTL
0115  C
0116      INTEGER COMMON (1)
0117      EQUIVALENCE (COMMON (1), ITEK (1))
0118      EQUIVALENCE (IARRY (1), LUT)
0119      EQUIVALENCE (IARY2 (1), ISTRK)
0120      EQUIVALENCE (IARY2 (2), ISECT)
0121      EQUIVALENCE (IARY2 (3), ICODE)
0122      EQUIVALENCE (IARY2 (4), LEN)
0123  C
0124      LOGICAL LER
0125      INTEGER CHNG(5)
0126  C
0127      DATA CHNG/2H D,2H E,2H F,2H G,2H H/
0128  C
0129  C          INITIALIZE NO, IADD, IPASS
0130      NO = 0
0131      IADD = 0
0132      IPASS=0
0133  C          DISPLAY MODE
0134      1      IF (,NOT,LER ) GOTO 5
0135      CALL ERASE
0136      CALL HOME
0137      5      GOTO (10,20,30) MODE
0138      10 WRITE (LUT,1010)
0139          GOTO 40
0140      20 WRITE (LUT,2010)
0141          GOTO 40
0142      30 WRITE (LUT,3010)
0143  C          GIVE DIRECTIONS FOR INPUT MODE
0144  C          IF EDIT RESPONSE MODE, MAKE SURE THAT WE
0145  C          HAVE DATA TO EDIT
0146  C          IF EDIT EXPECTATION MODE, PROCEED NORMALLY
0147      40      IF(MODE,NE,2) GOTO 41
0148          IF(NU,GE,1) GOTO 50
0149      WRITE(LUT,1112)
0150          IF(LER) WRITE(LUT,1111)
0151          IF(LER) CALL BELL
0152          IF(LER) CALL TINPT(ICHAR)
0153      RETURN
0154      41      IF(MODE,EQ,3) GOTO 100
0155      WRITE(LUT,1110)
0156          IF(LER) WRITE(LUT,1111)
0157          IF(LER) CALL BELL
0158          IF(LER) CALL TINPT(ICHAR)
0159          IF(IPASS,NE,0) GOTO 200
0160          IF(LEXIT,NE,1) NO=NU
0161          IF(NO,EQ,0) GOTO 200
0162      GOTO(210,300,400,500,600,700,800,820) LEXIT
0163  C          EDIT RESPONSES
0164      50 WRITE (LUT,2020) NU
0165      51 READ(LUT,*) IANS
0166          IF (IANS,EQ,0) RETURN

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0167         IF (IANS.GE.1.AND.IANS.LE.3) GOTO (60,70,80) IANS
0168         WRITE (LUT,1200)
0169         GOTO 51
0170 C         ADD A LITHOLOGIC UNIT
0171 60     IF (NU.LT.10) GOTO 65
0172         WRITE (LUT,2070)
0173         GOTO 50
0174 65     NO = NU + 1
0175         LADD = 1
0176         MODE = 1
0177         GOTO 210
0178 C         SUBTRACT LITHOLOGIC UNIT
0179 70     IF (NU.GT.1) 72,71
0180 71     WRITE (LUT,2060)
0181         GOTO 50
0182 72     DO 73 I = 1, 7
0183 73     ROVRBD(I,NU) = 0
0184         IF(LE) CALL ERASE
0185         IF(LE) CALL HOME
0186         WRITE(LUT,2061) NU
0187         NU = NU - 1
0188         GOTO 850
0189 C         USER INPUT -> LITHOLOGIC UNIT NUMBER OF EDIT
0190 80     WRITE (LUT,2030)
0191         READ(LUT,*) NO
0192         IF (NO.LE.NU.AND.NO.GE.1) GOTO 100
0193         WRITE (LUT,2050) NU
0194         GOTO 80
0195 C         USER INPUT -> EDIT HEADING
0196 100    WRITE (LUT,2040)
0197 101    READ(LUT,1220) IANS
0198         IF (IANS.EQ.2HA ) GOTO 210
0199         IF (IANS.EQ.2HB ) GOTO 300
0200         IF (IANS.EQ.2HC ) GOTO 400
0201         IF (IANS.EQ.2HD ) GOTO 500
0202         IF (IANS.EQ.2HE ) GOTO 600
0203         IF (IANS.EQ.2HF ) GOTO 700
0204         IF (IANS.EQ.2HG ) GOTO 800
0205         IF (IANS.EQ.2HH ) GOTO 820
0206         IF (IANS.EQ.2HNO) RETURN
0207         WRITE (LUT,1200)
0208         GOTO 101
0209 C         EDIT EXPECTATIONS
0210 C         USER INPUT -> SUBHEADING NUMBER
0211 130    WRITE (LUT,3020)
0212 131    READ(LUT,*) II
0213         GOTO 175
0214 135    II=II + L
0215 C         USER INPUT -> LAND USE OPTION REFERENCE NUMBER
0216 136    WRITE (LUT,3030)
0217 138    READ(LUT,*) LUORN
0218         IF (LUORN.GE.1.AND.LUORN.LE.6) GOTO 137
0219         WRITE (LUT,1200)
0220         GOTO 138
0221 C         USER INPUT -> EXPECTATION VALUE
0222 137    WRITE (LUT,3035)

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0223 139 READ(LUT,*) OVRBDN(II,LUORN)
0224      IF (OVRBDN(II,LUORN).GE.0.AND.OVRBDN(II,LUORN).LE.4)
0225      +   GOTO 850
0226      WRITE (LUT,3040)
0227      GOTO 139
0228 C          EDIT CATEGORY RESPONSES
0229 150 IOLD = ROVRBD(NN,NO)
0230 151 WRITE (LUT,2045) IOLD
0231      GOTO 173
0232 C          INPUT CATEGORY RESPONSES
0233 C          USER INPUT -> ROVRBD(NN,NO)
0234 170 WRITE (LUT,2000)
0235 173 READ(LUT,*) ROVRBD(NN,NO)
0236      II=ROVRBD(NN,NO)
0237      IF (II.EQ.0) GOTO (950,176) MODE
0238 175      IF (II.GE.1.AND.II.LE.IOVR (NN) )
0239      +   GOTO (900,850,135) MODE
0240 176 WRITE (LUT,1200)
0241      GOTO (173,173,131) MODE
0242 C          DISPLAY HEADING A -> NUMBER OF ROCKS
0243 200 NO = NO + 1
0244 210 NN = 1
0245      IF(MODE.NE.1.AND.LER) CALL ERASE
0246      IF(MODE.NE.1.AND.LER) CALL HOME
0247      IF(MODE.NE.3) WRITE (LUT,1115) NO
0248      WRITE (LUT,1000) (OVRBD(1,I),I=1,13)
0249      WRITE (LUT,1020)
0250      WRITE (LUT,1050) ((OVRBD(K,I),I=1,13),K=2,3)
0251      J=1
0252      L=J - 1
0253      DO 215 K=4,7
0254      WRITE (LUT,1100) (OVRBD(K,I),I=1,13), (OVRBDN(J,I),I=1,6)
0255 215 J=J + 1
0256 220 GOTO (170,150,130) MODE
0257 C          DISPLAY HEADING B -> THICKNESS OF UNIT
0258 300 GOTO (330,320,310) MODE
0259 310 WRITE (LUT,3050)
0260      GOTO 100
0261 320 WRITE (LUT,2080) THICK (NO)
0262 330 WRITE (LUT,1210)
0263      READ(LUT,*) THICK (NO)
0264      IF (THICK (NO).GE.5) GOTO (400,850) MODE
0265      WRITE (LUT,1215)
0266      GOTO 330
0267 C          DISPLAY HEADING C -> TEXTURE
0268 400 NN = 2
0269      J = IOVR (1) + 1
0270      L=J - 1
0271      IF (.NOT.LER) GOTO 410
0272      CALL ERASE
0273      CALL HOME
0274      WRITE (LUT,1000) (OVRBD(1,I),I=1,13)
0275 410 WRITE (LUT,1020)
0276      WRITE (LUT,1050) ((OVRBD(K,I),I=1,13),K=8,10)
0277      DO 415 K=13,18
0278      WRITE (LUT,1100) (TPSL(K,I),I=1,13), (OVRBDN(J,I),I=1,6)

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0279      415 J=J + 1
0280      WRITE (LUT,1100) (OVBD(11,I),I=1,13), (OVRBDN(J,I),I=1,6)
0281      GOTO 220
0282 C      DISPLAY HEADING D -> BULK DENSITY
0283      500 IF (,NOT,LER) GOTO 510
0284      CALL ERASE
0285      CALL HOME
0286      510 WRITE (LUT,1000) (OVBD(1,1),I=1,13)
0287      NN=3
0288      J=IOVR (1) + IOVR (2) + 1
0289      L=J - 1
0290      WRITE (LUT,1020)
0291      WRITE (LUT,1051) CHNG (1), (TPSL(24,1),I=2,13)
0292      WRITE (LUT,1050) (TPSL(25,I),I=1,13)
0293      DO 515 K=26,27
0294      WRITE (LUT,1100) (TPSL(K,I),I=1,13), (OVRBDN(J,I),I=1,6)
0295      515 J=J + 1
0296      GOTO 220
0297 C      DISPLAY HEADING E -> SALINITY
0298      600 IF (,NOT,LER) GOTO 610
0299      CALL ERASE
0300      CALL HOME
0301      WRITE (LUT,1000) (OVBD(1,I),I=1,13)
0302      610 WRITE (LUT,1020)
0303      WRITE (LUT,1051) CHNG (2), (TPSL(28,I),I=2,13)
0304      NN=4
0305      J=IOVR (1) + IOVR (2) + IOVR (3) + 1
0306      L=J - 1
0307      DO 615 K=29,33
0308      WRITE (LUT,1100) (TPSL(K,1),I=1,13), (OVRBDN(J,I),I=1,6)
0309      615 J=J + 1
0310      GOTO 220
0311 C      DISPLAY HEADING F -> SODIUM ADSORPTION RATIO
0312      700 NN=5
0313      J=IOVR (1) + IOVR (2) + IOVR (3) + IOVR (4) + 1
0314      L=J - 1
0315      IF (,NOT,LER) GOTO 710
0316      CALL ERASE
0317      CALL HOME
0318      WRITE (LUT,1000) (OVBD(1,I),I=1,13)
0319      710 WRITE (LUT,1020)
0320      WRITE (LUT,1051) CHNG (3), (TPSL(34,I),I=2,13)
0321      WRITE (LUT,1050) (TPSL(35,I),I=1,13)
0322      DO 715 K=36,39
0323      WRITE (LUT,1100) (TPSL(K,I),I=1,13), (OVRBDN(J,I),I=1,6)
0324      715 J=J + 1
0325      GOTO 220
0326 C      DISPLAY HEADING G -> AVAILABLE NITROGEN
0327      800 NN=6
0328      J=IOVR (1) + IOVR (2) + IOVR (3) + IOVR (4) + IOVR (5) + 1
0329      L=J - 1
0330      IF (,NOT,LER) GOTO 810
0331      CALL ERASE
0332      CALL HOME
0333      810 WRITE (LUT,1000) (OVBD(1,1),I=1,13)
0334      WRITE (LUT,1020)

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0335      WRITE (LUT,1051) CHNG (4), (TPSL(40,1),1=2,13)
0336      WRITE (LUT,1050) (TPSL(41,1),I=1,13)
0337      DO 815 K=42,44
0338      WRITE (LUT,1100) (TPSL(K,I),I=1,13), (OVRBDN(J,I),I=1,6)
0339      815 J=J + 1
0340      GOTO 220
0341  C          DISPLAY HEADING H -> AVAILABLE PHOSPHORUS
0342      820 NN=7
0343      J=IOVR (1) + IOVR (2) + IOVR (3) + IOVR (4) + IOVR (5) +
0344      + IOVR (6) + 1
0345      L=J - 1
0346      IF (.NOT.LER) GOTO 825
0347      CALL ERASE
0348      CALL HOME
0349      WRITE (LUT,1000) (OVRBD(1,I),I=1,13)
0350      825 WRITE (LUT,1020)
0351      WRITE (LUT,1051) CHNG (5), (TPSL(45,1),1=2,13)
0352      WRITE (LUT,1050) (TPSL(46,1),I=1,13)
0353      DO 830 K=47,49
0354      WRITE (LUT,1100) (TPSL(K,I),I=1,13), (OVRBDN(J,I),I=1,6)
0355      830 J=J + 1
0356      GOTO 220
0357  C          USER INPUT -> GOTO NEXT LITHOLOGIC UNIT ?
0358      835 NEXT = NO + 1
0359      IF (NEXT.GT.10) GOTO 840
0360      WRITE (LUT,1120) NEXT
0361      READ(LUT,1220) IANS
0362      IF (IANS.NE.2HYES) GOTO 840
0363      IPASS=1
0364      GOTO 200
0365  C          DONE.FOR INPUT MODE, RETURN ** OTHERWISE FIX MODE
0366      840 IF (IADD.EQ.0) 843, 841
0367      841 MODE = 2
0368      843 NU = NO
0369      IF (IADD.EQ.0) RETURN
0370  C          EDIT MODE -> MORE CHANGES ?
0371      850 WRITE (LUT,3060)
0372      READ(LUT,1220) IANS
0373      IF (IANS.NE.2HYES) RETURN
0374      GOTO (50,100) MODE - 1
0375  C          INPUT MODE -> DIRECT TO PROPER HEADING
0376      900 GOTO (300,500,600,700,800,820,835) NN
0377  C          USER WANTS OUT -> SET EXIT TO ZERO AND RETURN
0378      950 EXIT = 0
0379      NU=NO
0380      RETURN
0381  C          FORMAT STATEMENTS
0382      1000 FORMAT (13A2,44 ("*"),/,26X,"*",
0383      &10X,"STANDARD EXPECTATIONS",11X,"*",/,
0384      &26X,44 ("*"),/,26X,"*CROP*",2X,
0385      &"NATIVE",2X,"*WILD*",2X,"WATER",3X,
0386      &"*HIGH*OTHER*",/,26X,
0387      &"*LAND*VEGETATION*LIFE*RECREATION*USE *",5X,"*")
0388  C
0389      1020 FORMAT (70 ("*"),/,26X,"*"4X"*"10X"*"4X"*"10X"*"4X"*"5X"*)
0390  C

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0391 1050 FORMAT (13A2,"*",4X,"*",10X,"*",4X,"*",
0392      &10X,"*",4X,"*",5X,"*")
0393 C
0394 1051 FORMAT (A2,12A2,"*"4X"*"10X"*"4X"*",
0395      &10X"*"4X"*"5X"*")
0396 C
0397 1100 FORMAT (13A2,
0398      &"* "I1" * "11" * "I1" * "I1" * "I1" * "I1" *"),
0399 C
0400 1110 FORMAT ( 5X">DESCRIBE OVERBURDEN-BEDROCK LITHOLOGICAL UNITS"/,
0401      & 5X" FIVE OR MORE FEET THICK, ABOVE AND BETWEEN MINABLE"/,
0402      & 5X" DEPOSITS,"//,
0403      & 5X">CLASSIFY ONLY THOSE UNITS THAT WILL USUALLY APPEAR"/,
0404      & 5X" ON THE SURFACE UNDER THE CURRENT MINE PLAN,"//,
0405      & 5X">START WITH THE UPPERMOST UNIT AND PROCEED DOWNWARD"/,
0406      & 5X" TO THE TOP OF THE LOWEST MINABLE COAL SEAM,"//,
0407      & 5X">UP TO 10 LITHOLOGIC UNITS ARE CURRENTLY ALLOWED."/)
0408 C
0409 1111 FORMAT("HIT THE RETURN KEY TO CONTINUE..._")
0410 1112 FORMAT(/5X"SORRY. THERE ARE NO DATA TO EDIT"/)
0411 C
0412 1115 FORMAT ( 5X"NOW WORKING ON LITHOLOGIC UNIT"12,/)
0413 C
0414 1120 FORMAT ( 5X"PROCEED TO UNIT #12 ? (YES OR NO) ->_")
0415 C
0416 1200 FORMAT (/ "YOU HAVE TYPED IN AN ILLEGAL ANSWER.",
0417      &/, "GIVE HER ANOTHER SHOT -> _")
0418 C
0419 1210 FORMAT ( 3X"B.) THICKNESS OF THIS UNIT? (FEET) ->_")
0420 C
0421 1215 FORMAT ( 5X"YOUR UNIT MUST BE AT LEAST 5 FEET THICK.RE-ENTER."/)
0422 C
0423 1220 FORMAT (A2)
0424 C
0425 2000 FORMAT ("ENTER THE APPROPRIATE"5X,44 ("*"),/,
0426      &"NUMBER OR ZERO TO QUIT ->_")
0427 C
0428 1010 FORMAT ( 15X"INPUT RESPONSES/OVERBURDEN"/)
0429 C
0430 2010 FORMAT ( 15X"EDIT RESPONSES/OVERBURDEN"/)
0431 C
0432 3010 FORMAT ( 15X"EDIT EXPECTATIONS/OVERBURDEN"/)
0433 C
0434 2020 FORMAT ( 5X"YOU ARE PRESENTLY WORKING WITH "12" LITHOLOGIC"/,
0435      &5X"UNITS.SELECT ONE OF THE FOLLOWING OPTIONS :"/,
0436      &7X"0.) EXIT FROM THIS OPTION"/,
0437      &7X"1.) ADD ANOTHER LITHOLOGIC UNIT,"/,
0438      &7X"2.) SUBTRACT THE LAST LITHOLOGIC UNIT,"/,
0439      &7X"3.) EDIT CURRENT DATA,"/,
0440      &5X" (ENTER THE APPROPRIATE NUMBER) ->_")
0441 C
0442 2030 FORMAT ( 5X"IN WHICH LITHOLOGIC UNIT IS YOUR DESIRED EDIT?"/,
0443      &5X"ENTER THE NUMBER HERE ->_")
0444 C
0445 2040 FORMAT ( 5X"IN WHICH HEADING IS YOUR DESIRED EDIT?"/,
0446      &5X" (ENTER A,B,C,D,E,F,G,H, OR NONE) ->_")

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0447 C
0448 2045 FORMAT ( 5X"YOUR CURRENT RESPONSE IS"12,/,
0449 85X"ENTER YOUR NEW RESPONSE HERE ->_" )
0450 C
0451 2050 FORMAT ( 5X"ERROR -> ONLY "12" UNITS DEFINED.TRY AGAIN."/)
0452 C
0453 2060 FORMAT (5X"ERROR -> CAN'T SUBTRACT THE FIRST UNIT.RE-SELECT."/)
0454 2061 FORMAT(5X"LITHOLOGIC UNIT # "12" HAS BEEN SUBTRACTED")
0455 C
0456 2070 FORMAT ( 5X"ERROR -> CAN'T ADD ANOTHER UNIT.TRY OVER."/)
0457 C
0458 2080 FORMAT ( 5X"CURRENT THICKNESS OF THIS UNIT IS "F7.2" FEET.")
0459 C
0460 3020 FORMAT ( 5X"IN WHICH SUB-HEADING IS YOUR DESIRED EDIT?"/,
0461 85X" (ENTER THE APPROPRIATE NUMBER HERE) =>_" )
0462 C
0463 3030 FORMAT(/5X"SELECT THE LAND USE OPTION YOU WISH TO CHANGE"/
0464 > 1X" -1- / -2- / -3- / -4- / -5- / -6- /"/
0465 > 1X"CROPLAND/NAT.VEG./WILDLIFE/WAT.REC./HIGH USE/ OTHER/"
0466 >/5X"ENTER YOUR SELECTION HERE -> _")
0467 C
0468 3035 FORMAT ( 5X"ENTER YOUR NEW EXPECTATION VALUE HERE ->_" )
0469 C
0470 3040 FORMAT (/, 5X"ERROR--> YOUR EXPECTATION VALUE MUST BE"/,
0471 %5X"0,1,2,3, OR 4 TO AVOID INTRODUCING A BIAS -> _")
0472 C
0473 3050 FORMAT ( 5X"THERE IS NO EXPECTATION OF SUCCESS VALUE ASSOCIATED"/,
0474 85X"WITH THE THICKNESS OF THE UNIT.PLEASE RE-SELECT."/)
0475 C
0476 3060 FORMAT ( 5X"ANY MORE EDITS TO OVERBURDEN? (YES OR NO) ->_" )
0477 C
0478 C
0479 END
0480 END$

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&SOCEC T=00004 IS ON CR00015 USING 00045 BLKS R=0000

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0001  FTN4
0002                      SUBROUTINE SOCEC
0003  C      FULL DISPLAY--CATEGORY 10 / SOCIO-ECONOMICS
0004  C
0005  C SOCEC IS ACCESSED BY EIFD TO SCHEDULE INPUTS AND EDITS TO
0006  C CATEGORY RESPONSES, AND EDITS TO THE EXPECTATION OF SUCCESS
0007  C VALUES TO CATEGORY 10 - SOCIO-ECONOMICS, USING FULL DISPLAY
0008  C
0009  C THE CALLING SEQUENCE IS :      CALL SOCEC
0010  C
0011  C SOCEC USES THE TCS ROUTINES : ERASE AND HOME
0012  C
0013  C THE LOCAL VARIABLES ARE :
0014  C      IANS  -> ANSWER CELL
0015  C      II    -> 'I' INDEX [ (I,J) ] TO SOCECN ARRAY
0016  C      IOLD  -> PRE-EDIT CATEGORY RESPONSE VALUE
0017  C      LUORN -> LAND USE OPTION REFERENCE NUMBER
0018  C              1-> CROPLAND
0019  C              2-> NATIVE VEGETATION
0020  C              3-> WILDLIFE
0021  C              4-> WATER RECREATION
0022  C              5-> HIGH USE
0023  C              6-> OTHER
0024  C      NM    -> HEADING NUMBER
0025  C
0026  C SOCEC IS SWAPPED IN BY PROGRAM SOCEX
0027  C
0028  C THIS ROUTINE WAS WRITTEN BY GREEN
0029  C
0030  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0031  C =====
0032  C
0033  C      TEKTRONIX COMMON
0034  C
0035  C      COMMON ITEX (45)
0036  C
0037  C      LOGICAL UNITS AND COMMON LOCATION
0038  C
0039  C      COMMON IARY(5),IARY2(5),LER,LUF,LUL
0040  C
0041  C      POINTERS
0042  C
0043  C      COMMON EXIT  ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0044  C      COMMON IOPTN ,IOVR(7),IPNTR ,ISOC(6),ISUB(8)
0045  C      COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT ,LUD
0046  C      COMMON MODE  ,NANM ,NCLI ,NGEN ,NGRW
0047  C      COMMON NOVR  ,NSECTS ,NSOC ,NSUB ,NSUR
0048  C      COMMON NTOP  ,NU ,NVEG
0049  C
0050  C      GRADING PARAMETERS
0051  C
0052  C      COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCPA(5)
0053  C      COMMON GROVES(5),HWHT(5,10),HWSLI(5,10),NSPP(5),PCEQ19(4)
0054  C      COMMON PERCNT(5,10),REHCPY(5),REHVOL(5),SLOPE(5,10),WBP
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0055 C
0056 C      CATEGORY TEXT
0057 C
0058      COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0059      COMMON OVRD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0060      COMMON TPSSL(49,13),VGTA(15,13)
0061 C
0062 C      EXPECTATION VALUES
0063 C
0064      COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0065      COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0066      COMMON TOPSOI(33,6),VEGETA(10,6)
0067 C
0068 C      CATEGORY RESPONSES
0069 C
0070      COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0071      COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0072      COMMON RTOPSO(9),RVEGET(2)
0073 C
0074 C      FEASI,TECON,OFUSE SUBSYSTEM PARAMETERS
0075 C
0076      COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CAHEM
0077      COMMON CABS(2),CAC,CACP,CADF,CADH
0078      COMMON CADS,CAEAF,CAHSAF,CAHSTS,CAIF
0079      COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0080      COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0081      COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0082 C
0083      INTEGER EXIT,CLMA,GDES,GWHY,OVRD,SBSL
0084      INTEGER SCEC,SWHY,TPSSL,VGTA,ANIM
0085      INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0086      INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0087      INTEGER VEGETA,ANIMAL
0088      INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0089      INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0090      INTEGER RCLTEC,TTL
0091 C
0092      INTEGER COMMON (1)
0093      EQUIVALENCE (COMMON (1), ITEK (1))
0094      EQUIVALENCE (IARY1 (1), LUT)
0095      EQUIVALENCE (IARY2 (1), ISTRK)
0096      EQUIVALENCE (IARY2 (2), ISECT)
0097      EQUIVALENCE (IARY2 (3), ICODE)
0098      EQUIVALENCE (IARY2 (4), LEN)
0099 C
0100      LOGICAL LER
0101 C
0102 C      DISPLAY MODE
0103      1 IF (.NOT.LER) GOTO 5
0104      CALL ERASE
0105      CALL HOME
0106      5 GOTO (10,20,30) MODE
0107      10 WRITE (LUT,1010)
0108      GOTO 40
0109      20 WRITE (LUT,2010)
0110      GOTO 40

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0111      30 WRITE (LUT,3010)
0112      40      IF ( MODE.GT.1) GOTO 50
0113      GOTO (100,200,300,400,500,600) LEXIT
0114 C      USER INPUT -> EDIT HEADING
0115      50 WRITE (LUT,2020)
0116      51 READ (LUT,2030) IANS
0117          IF (IANS.EQ.2HA ) GOTO 100
0118          IF (IANS.EQ.2HB ) GOTO 200
0119          IF (IANS.EQ.2HC ) GOTO 300
0120          IF (IANS.EQ.2HD ) GOTO 400
0121          IF (IANS.EQ.2HE ) GOTO 500
0122          IF (IANS.EQ.2HF ) GOTO 600
0123          IF (IANS.EQ.2HNO) RETURN
0124      WRITE (LUT,1200)
0125      GOTO 51
0126 C      EDIT EXPECTATIONS
0127 C      USER INPUT -> SUBHEADING NUMBER
0128      52 WRITE (LUT,3020)
0129      57 READ (LUT,*) II
0130      GOTO 85
0131 C      USER INPUT -> LAND USE OPTION REFERENCE NUMBER
0132      54 WRITE (LUT,3030)
0133      55 READ (LUT,*) LUORN
0134          IF (LUORN.GE.1.AND.LUORN.LE.6) GOTO 56
0135      WRITE (LUT,1200)
0136      GOTO 55
0137      56 II = II + L
0138 C      USER INPUT -> EXPECTATION VALUE
0139      58 WRITE (LUT,3040)
0140      59 READ (LUT,*) SOCECN (II,LUORN)
0141          IF (SOCECN (II,LUORN).GE.0.AND.SOCECN (II,LUORN).LE.4)
0142      +      GOTO 700
0143      WRITE (LUT,3050)
0144      GOTO 59
0145 C      EDIT RESPONSES
0146      60 IOLD = RSOCEC (NN)
0147      65 WRITE (LUT,2040) IOLD
0148      GOTO 83
0149 C      INPUT RESPONSES
0150 C      USER INPUT -> RSOCEC (NN)
0151      70 WRITE (LUT,2000)
0152      83 READ (LUT,*) RSOCEC (NN)
0153          IF (RSOCEC (NN).EQ.0) GOTO (900,87) MODE
0154      II = RSOCEC (NN)
0155      85      IF (II.GE.1.AND.II.LE.ISOC (NN)) GOTO (800,700,54) MODE
0156      87 WRITE (LUT,1200)
0157      GOTO (83,83,57) MODE
0158 C      DISPLAY HEADING A -> ARCHAEOLOGIC SITES
0159      100 NN = 1
0160          J = 1
0161          L = J-1
0162          IF(MODE.NE.1.AND.LER) CALL ERASE
0163          IF(MODE.NE.1.AND.LER) CALL HOME
0164      105 WRITE (LUT,1000) (SCEC (1,1),I = 1,13)
0165      WRITE (LUT,1020)
0166      WRITE (LUT,1050) ( (SCEC (K,I),I = 1,13),K = 2,4)

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0167      DO 110 K = 5,6
0168      WRITE (LUT,1100) (SCEC (K,1),I = 1,13), (SOCECN (J,I),I = 1,6)
0169      110 J = J + 1
0170      111 GOTO (70,60,52) MODE
0171 C      DISPLAY HEADING B -> PRESENT LAND USE
0172      200 NN = 2
0173      J = ISOC (1) + 1
0174      L = J-1
0175      IF (.NOT.LER) GOTO 205
0176      CALL ERASE
0177      CALL HOME
0178      WRITE (LUT,1000) (SCEC (1,I),I = 1,13)
0179      205 WRITE (LUT,1020)
0180      WRITE (LUT,1050) ( (SCEC (K,I),I = 1,13),K = 7,9)
0181      DO 210 K = 10,13
0182      WRITE (LUT,1100) (SCEC (K,I),I = 1,13), (SOCECN (J,I),I = 1,6)
0183      210 J = J + 1
0184      WRITE (LUT,1050) (SCEC (14,I),I = 1,13)
0185      DO 215 K = 15,16
0186      WRITE (LUT,1100) (SCEC (K,I),I = 1,13), (SOCECN (J,I),I = 1,6)
0187      215 J = J + 1
0188      GOTO 111
0189 C      DISPLAY HEADING C -> SECONDARY LAND USE
0190      300 NN = 3
0191      J = ISOC (1) + ISOC (2) + 1
0192      L = J-1
0193      IF (.NOT.LER) GOTO 305
0194      CALL ERASE
0195      CALL HOME
0196      WRITE (LUT,1000) (SCEC (1,I),I = 1,13)
0197      305 WRITE (LUT,1020)
0198      WRITE (LUT,1050) (SCEC (17,I),I = 1,13)
0199      DO 310 K = 18,23
0200      WRITE (LUT,1100) (SCEC (K,I),I = 1,13), (SOCECN (J,I),I = 1,6)
0201      310 J = J + 1
0202      GOTO 111
0203 C      DISPLAY HEADING D -> FUTURE LAND USE - OWNER
0204      400 NN = 4
0205      J = ISOC (1) + ISOC (2) + ISOC (3) + 1
0206      L = J-1
0207      IF (.NOT.LER) GOTO 410
0208      CALL ERASE
0209      CALL HOME
0210      WRITE (LUT,1000) (SCEC (1,I),I = 1,13)
0211      410 WRITE (LUT,1020)
0212      WRITE (LUT,1050) ( (SCEC (K,I),I = 1,13),K = 24,26)
0213      DO 415 K = 18,22
0214      WRITE (LUT,1100) (SCEC (K,I),I = 1,13), (SOCECN (J,I),I = 1,6)
0215      415 J = J + 1
0216      GOTO 111
0217 C      DISPLAY HEADING E -> FUTURE LAND USE - COMMUNITY
0218      500 NN = 5
0219      J = ISOC (1) + ISOC (2) + ISOC (3) + ISOC (4) + 1
0220      L = J-1
0221      IF (.NOT.LER) GOTO 505
0222      CALL ERASE

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0223      CALL HOME
0224      WRITE (LUT,1000) (SCEC (1,I),I = 1,13)
0225 505  WRITE (LUT,1020)
0226      WRITE (LUT,1050) ( (SCEC (K,I),I = 1,13),K = 27,29)
0227      DO 510 K = 18,22
0228      WRITE (LUT,1100) (SCEC (K,I),I = 1,13), (SOCECN (J,I),I = 1,6)
0229 510  J = J + 1
0230      GOTO 111
0231 C      DISPLAY HEADING F -> FUTURE LAND USE - GOVERNMENT
0232 600  NN = 6
0233      J = ISOC (1) + ISOC (2) + ISOC (3) + ISOC (4) + ISOC (5) + 1
0234      L = J-1
0235      IF (.NOT.LER) GOTO 605
0236      CALL ERASE
0237      CALL HOME
0238      WRITE (LUT,1000) (SCEC (1,I),I = 1,13)
0239 605  WRITE (LUT,1020)
0240      WRITE (LUT,1050) ( (SCEC (K,I),I = 1,13),K = 30,33)
0241      DO 610 K = 18,22
0242      WRITE (LUT,1100) (SCEC (K,I),I = 1,13), (SOCECN (J,I),I = 1,6)
0243 610  J = J + 1
0244      GOTO 111
0245 C      USER INPUT -> MORE EDITS ?
0246 700  WRITE (LUT,3060)
0247      READ (LUT,2030) IANS
0248      IF (IANS.NE.2HYES) RETURN
0249      GOTO 1
0250 C      INPUT MODE -> DIRECT TO PROPER HEADING
0251 800  IF (NN.EQ.NSOC) RETURN
0252      GOTO (200,300,400,500,600) NN
0253 C      USER WANTS OUT -> RETURN
0254 900  RETURN
0255 C      FORMAT STATEMENTS
0256 1000 FORMAT ( 13A2,44 ("*"),/,26X,"*",
0257      &10X,"STANDARD EXPECTATIONS",11X,"*",/,
0258      &26X,44 ("*"),/,26X,"*CROP*",2X,
0259      &"NATIVE",2X,"*WILD*",2X,"WATER",3X,
0260      &"*HIGH*OTHER*",/,26X,
0261      &"*LAND*VEGETATION*LIFE*RECREATION*USE *"5X"*)
0262 C
0263 1020 FORMAT (70 ("*"),/,26X"*"4X"*"10X"*"4X"*"10X"*"4X"*"5X"*)
0264 C
0265 1050 FORMAT (13A2,"*",4X,"*",10X,"*",4X,"*",
0266      &10X,"*",4X,"*",5X,"*")
0267 C
0268 1100 FORMAT (13A2,
0269      &"* "I1" * "I1" * "I1" * "I1" * "I1" * "I1" *)
0270 C
0271 1200 FORMAT (/ "YOU HAVE TYPED IN AN ILLEGAL ANSWER.",
0272      &/, "GIVE HER ANOTHER SHOT -> _")
0273 C
0274 2000 FORMAT ("ENTER THE APPROPRIATE",5X,
0275      &44 ("*"),/, "NUMBER, OR ZERO TO QUIT -> _")
0276 C
0277 1010 FORMAT ( 17X"INPUT RESPONSES/SOCIO-ECONOMICS"/)
0278 C

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0279 2010 FORMAT ( 17X"EDIT RESPONSES/SOCIO-ECONOMICS"/)
0280 C
0281 3010 FORMAT ( 17X"EDIT EXPECTATIONS/SOCIO-ECONOMICS"/)
0282 C
0283 2020 FORMAT (5X"IN WHICH HEADING IS YOUR DESIRED EDIT ?"/,
0284 85X" (ENTER A,B,C,D,E,F, OR NONE) -> _")
0285 C
0286 2030 FORMAT (A2)
0287 C
0288 2040 FORMAT (5X"YOUR CURRENT RESPONSE IS ->"I1,/,
0289 85X"ENTER YOUR NEW RESPONSE HERE -> _")
0290 C
0291 3020 FORMAT (5X"IN WHICH SUB-HEADING IS THE EXPECTATION VALUE"/,
0292 85X"YOU WISH TO CHANGE? (ENTER THE APPROPRIATE NUMBER) = > _")
0293 C
0294 3030 FORMAT(/5X"SELECT THE LAND USE OPTION YOU WISH TO CHANGE"/
0295 > 1X" -1- / -2- / -3- / -4- / -5- / -6- /"/
0296 > 1X"CROPLAND/NAT.VEG./WILDLIFE/WAT.REC./HIGH USE/ OTHER/"
0297 >/5X"ENTER YOUR SELECTION HERE -> _")
0298 C
0299 3040 FORMAT (5X"ENTER YOUR NEW EXPECTATION VALUE HERE -> _")
0300 C
0301 3050 FORMAT (/, 5X"ERROR--> YOUR EXPECTATION VALUE MUST BE"/,
0302 5X"0,1,2,3, OR 4 TO AVOID INTRODUCING A BIAS -> _")
0303 C
0304 3060 FORMAT (5X"ANY MORE EDITS TO SOCIO-ECONOMICS ? (YES OR NO) = > _")
0305 C
0306 END
0307 END$

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&SRCD T=00004 IS ON CR00015 USING 00043 BLKS R=0000

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0001  FTN4
0002                      SUBROUTINE SRCD
0003  C          ---STORE/RETRIEVE CLAIM DATA---
0004  C
0005  C LEVEL 1
0006  C
0007  C SRCD IS ACCESSED BY CLAIM TO STORE AND RETRIEVE
0008  C THE USER'S DATA ENTRIES.
0009  C
0010  C FILES ARE CREATED SUCH THAT THE CHARACTERS : $*,$, AND **
0011  C APPEAR IN THE FIRST WORD OF THE FILE'S ID SEGMENT FOR THE
0012  C GENERAL DESCRIPTION PARAMETERS, ENVIRONMENTAL DATA CATEGORIES,
0013  C AND THE ENTIRE DATA SET, RESPECTIVELY. IOPTN = 1 MEANS RETRIEVE,
0014  C IOPTN = 2 MEANS STORE. IARRY(2) = 3 MEANS THAT WE ARE SCHEDULED
0015  C BY SEAMPLAN.
0016  C
0017  C SRCD IS SWAPPED IN BY PROGRAM SRCIX
0018  C SRCD USES THE TCS ROUTINES ERASE AND HOME, AND CALLS
0019  C THE SYSTEM ROUTINE SPOLU.
0020  C THE LOCAL VARIABLES ARE:
0021  C
0022  C     FILID  - 3 WORD ID SEGMENT OF THE FILE (INTEGER)
0023  C     IANS   - ANSWER CELL
0024  C
0025  C THIS ROUTINE WAS WRITTEN BY GREEN
0026  C
0027  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0028  C =====
0029  C
0030  C     TEKTRONIX COMMON
0031  C
0032  C     COMMON ITEK (45)
0033  C
0034  C     LOGICAL UNITS AND COMMON LOCATION
0035  C
0036  C     COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0037  C
0038  C     POINTERS
0039  C
0040  C     COMMON EXIT      ,IANM(3),ICL1(2),IGEN(3),IGRW(5)
0041  C     COMMON IOPTN    ,IOVR(7),IPNTR  ,ISOC(6),ISUB(8)
0042  C     COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT  ,LUO
0043  C     COMMON MODE     ,NANM      ,NCLI      ,NGEN      ,NGRW
0044  C     COMMON NOVR     ,NSECTS   ,NSOC      ,NSUB      ,NSUR
0045  C     COMMON NTOP     ,NU       ,NVEG
0046  C
0047  C     GRADING PARAMETERS
0048  C
0049  C     COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCPA(5)
0050  C     COMMON GRDUBS(5),HWHT(5,10),HWSLI(5,10),NSPP(5),PCEQ19(4)
0051  C     COMMON PERCNT(5,10),REHCPY(5),REHVOL(5),SLOPE(5,10),WRF
0052  C
0053  C     CATEGORY TEXT
0054  C
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0055      COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0056      COMMON OVRD(11,13),SBSL(13), SCEC(33,13),SWHY(44,13)
0057      COMMON TPSL(49,13),VGTA(15,13)
0058      C
0059      C      EXPECTATION VALUES
0060      C
0061      COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0062      COMMON OVRD(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0063      COMMON TOPSOI(33,6),VEGETA(10,6)
0064      C
0065      C      CATEGORY RESPONSES
0066      C
0067      COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0068      COMMON ROVRD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0069      COMMON RTOPSO(9),RVEGET(2)
0070      C
0071      C      FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0072      C
0073      COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHM
0074      COMMON CABS(2),CAC,CACP,CADF,CADH
0075      COMMON CADS,CAEAF,CAHSAF,CAHSTS,CAIF
0076      COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0077      COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0078      COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0079      C
0080      INTEGER EXIT,CLMA,GDES,GWHY,OVRD,SBSL
0081      INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0082      INTEGER CLIMAT,GENDES,GRWHYD,OVRD(28)
0083      INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0084      INTEGER VEGETA,ANIMAL
0085      INTEGER RCLIMA,RGENDE,RGRWHY,ROVRD,RSOCEC
0086      INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0087      INTEGER RCLTEC,TTL
0088      C
0089      INTEGER COMMON (1)
0090      EQUIVALENCE (COMMON (1), ITEK (1))
0091      EQUIVALENCE (IARY (1), LUT)
0092      EQUIVALENCE (IARY2 (1), ISTRK)
0093      EQUIVALENCE (IARY2 (2), ISECT)
0094      EQUIVALENCE (IARY2 (3), ICODE)
0095      EQUIVALENCE (IARY2 (4), LEN)
0096      C
0097      LOGICAL LER
0098      C
0099      INTEGER FILID (3)
0100      DATA ICR/15/
0101      C
0102      C      USER INPUT -> FILE NAME
0103      C
0104      10 IF (LER) CALL ERASE
0105      IF (LER) CALL HOME
0106      IF (IOPTN .EQ. 2) WRITE (LUT,1001)
0107      IF (IOPTN .EQ. 1) WRITE (LUT,1002)
0108      GOTO (12,14,16) IPNTR
0109      12 FILID (1) = 2H**
0110      WRITE(LUT,2001)

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0111      GOTO 18
0112      14 FILID (1) = 2H**
0113      WRITE (LUT,2002)
0114      GOTO 18
0115      16 FILID (1) = 2H**
0116      WRITE (LUT,2003)
0117      18 WRITE (LUT,2004)
0118      READ (LUT, 1003) (FILID (1), I = 2, 3)
0119      C
0120      C      TEST TO SEE IF THIS FILE EXISTS
0121      C      (LUF = - 6 MEANS FILE NON-EXISTENT)
0122      C
0123      CALL SPOLU (LUF,FILID,2,1,ICR)
0124      IF (LUF .EQ. -6) GOTO (70, 25) IOPTN
0125      C
0126      C      THE FILE HAS BEEN SUCCESSFULLY OPENED. IF THE
0127      C      USER IS STORING DATA, MAKE SURE THAT HE WANTS TO
0128      C      PURGE THE EXISTING DATA ** IF HE IS RETRIEVING,
0129      C      BRANCH OUT
0130      C
0131      IF (LUF .LT. 0) STOP 1
0132      IF (IOPTN .EQ. 1) GOTO (500, 600, 500) IPNTR
0133      READ (LUF, 1019) TTL
0134      WRITE (LUT, 1005) (FILID (J), J = 2, 3), TTL
0135      READ (LUT, 1004) IANS
0136      IF (IANS .EQ. 2HYE) 20, 30
0137      C
0138      C      PURGE THE EXISTING FILE AND OPEN A NEW FILE FOR WRITE
0139      C      * BRANCH OUT *
0140      C
0141      20 CALL SPOLU (LUF,FILID,2,3,ICR)
0142      IF (LUF .LT. 0) STOP 2
0143      25 WRITE (LUT,1042)
0144      READ (LUT,1019) TTL
0145      CALL SPOLU (LUF,FILID,3,1,ICR)
0146      IF (LUF .LT. 0) STOP 3
0147      GOTO (100, 200, 100) IPNTR
0148      C
0149      C      CLOSE EXISTING FILE ** SEE IF USER WANTS TO
0150      C      INPUT A NEW FILE NAME ** IF NOT, RETURN
0151      C
0152      30 CALL SPOLU (LUF,FILID,2,2,ICR)
0153      IF (LUF .LT. 0) STOP 4
0154      WRITE (LUT,1006)
0155      35 READ (LUT,1004) IANS
0156      IF (IANS .EQ. 2HYE) GOTO 10
0157      RETURN
0158      C
0159      C      THE FILE DOES NOT EXIST ** IF THE USER IS RETRIEVING,
0160      C      SEE IF HE WANTS TO INPUT A NEW FILE NAME
0161      C
0162      70 WRITE (LUT, 1007) (FILID (J), J = 2, 3)
0163      GOTO 35
0164      C
0165      C      STORE THE GENERAL DESCRIPTION PARAMETERS
0166      C

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0167      100 WRITE (LUF, 1019) TTL
0168      WRITE (LUF, 1020) AREA
0169      WRITE (LUF, 1021) BENLEN
0170      WRITE (LUF, 1021) BENWI
0171      WRITE (LUF, 1022) COGO
0172      WRITE (LUF, 1020) GCPA
0173      WRITE (LUF, 1020) GRDVBS
0174      WRITE (LUF, 1021) HWHT
0175      WRITE (LUF, 1021) HWSLI
0176      WRITE (LUF, 1023) NSFP
0177      WRITE (LUF, 1024) PCEQ19
0178      WRITE (LUF, 1021) PERCNT
0179      WRITE (LUF, 1020) REHCPY
0180      WRITE (LUF, 1020) REHVOL
0181      WRITE (LUF, 1021) SLOPE
0182      WRITE (LUF, 1022) WBF
0183      WRITE (LUF, 1025) RGENDE
0184      WRITE (LUF, 1022) CSTES
0185      IF (IPNTR .EQ. 1) 450, 210
0186  C
0187  C      STORE THE ENVIRONMENTAL FEASIBILITY CATEGORY RESPONSES -
0188  C
0189      200 WRITE (LUF, 1019) TTL
0190      210 WRITE (LUF, 1030) RANIMA
0191      WRITE (LUF, 1031) RCLIMA
0192      WRITE (LUF, 1032) RGRWHY
0193      WRITE (LUF, 1033) ROVRBD
0194      WRITE (LUF, 1040) NU
0195      WRITE (LUF, 1041) THICK
0196      WRITE (LUF, 1034) RSOCEC
0197      WRITE (LUF, 1035) RSUBSO
0198      WRITE (LUF, 1036) RSURHY
0199      WRITE (LUF, 1040) RTOPSD (1)
0200      215 WRITE (LUF, 1037) (RTOPSD (1), I = 2, NTOP)
0201      WRITE (LUF, 1038) RVEGET
0202      WRITE (LUF, 1022) THKTS
0203      WRITE (LUF, 1022) CSTRM
0204      WRITE (LUF, 1022) CSTRP
0205  C
0206  C      CLOSE FILID ** RETURN
0207  C
0208      450 CALL SPOLD (LUF, FILID, 3, 2, ICR)
0209      IF (LUF .LT. 0) STOP 6
0210      RETURN
0211  C
0212  C      RETRIEVE GENERAL DESCRIPTION PARAMETERS
0213  C
0214      500 READ (LUF, 1019) TTL
0215      WRITE (LUT, 1009) (FILID (J), J = 2, 3), TTL
0216      IF (LER) WRITE (LUT, 1043)
0217      IF (LER) CALL BELL
0218      IF (LER) CALL TINPT (ICAR)
0219      READ (LUF, 1020) AREA
0220      READ (LUF, 1021) BENLEN
0221      READ (LUF, 1021) BENWI
0222      READ (LUF, 1022) COGO

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0223      READ (LUF, 1020) GCPA
0224      READ (LUF, 1020) GRDVBS
0225      READ (LUF, 1021) HWHT
0226      READ (LUF, 1021) HWSLI
0227      READ (LUF, 1023) NSFP
0228      READ (LUF, 1024) PCEQ19
0229      READ (LUF, 1021) PERCNT
0230      READ (LUF, 1020) REHCPY
0231      READ (LUF, 1020) REHVOL
0232      READ (LUF, 1021) SLOPE
0233      READ (LUF, 1022) WBP
0234      READ (LUF, 1025) RGENDE
0235      READ (LUF, 1022) CSTES
0236      IF (IPNTR .EQ. 1) 750, 610
0237      C
0238      C      RETRIEVE THE ENVIRONMENTAL FEASIBILITY CATEGORY RESPONSES
0239      C
0240      600 READ (LUF, 1019) TTL
0241          WRITE (LUT, 1009) (FILID (J), J = 2, 3), TTL
0242          IF (LER) WRITE (LUT, 1043)
0243          IF (LER) CALL BELL
0244          IF (LER) CALL TINPT (ICAR)
0245      610 READ (LUF, 1030) RANIMA
0246          READ (LUF, 1031) RCLIMA
0247          READ (LUF, 1032) RGRWHY
0248          READ (LUF, 1033) ROVRBD
0249          READ (LUF, 1040) NU
0250          READ (LUF, 1041) THICK
0251          READ (LUF, 1034) RSOCEC
0252          READ (LUF, 1035) RSUBSO
0253          READ (LUF, 1036) KSRHY
0254          IF (IARRY(2).EQ.3) READ (LUF, 1040) KDUM
0255          IF (IARRY(2).NE.3) READ (LUF, 1040) RTOPSO (1)
0256      615 READ (LUF, 1037) (RTOPSO (1), I = 2, NTOP)
0257          READ (LUF, 1038) RVEGET
0258          IF (IARRY (2) .EQ. 3) READ (LUF, 1022) DUM
0259          IF (IARRY(2).EQ.3) READ (LUF, 1022) DUM
0260          IF (IARRY(2).EQ.3) READ (LUF, 1022) DUM
0261          IF (IARRY(2).NE.3) READ (LUF, 1022) THKTS
0262          IF (IARRY(2).NE.3) READ (LUF, 1022) CSTRM
0263          IF (IARRY(2).NE.3) READ (LUF, 1022) CSTRP
0264      C
0265      C      CLOSE THE FILE ** RETURN
0266      C
0267      750 CALL SPOLU (LUF, FILID, 2, 2, ICR)
0268          IF (LUF .LT. 0) STOP 7
0269          RETURN
0270      C
0271      C      FORMAT STATEMENTS
0272      2001 FORMAT(5X'GENERAL DESCRIPTION' /
0273          >          5X'-----' /)
0274      2002 FORMAT(5X'ENVIRONMENTAL DATA' /
0275          >          5X'-----' /)
0276      2003 FORMAT(5X'GENERAL DESCRIPTION AND ENVIRONMENTAL DATA' /
0277          >          5X'-----' /)
0278      C

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```

0279 2004 FORMAT(5X"INPUT THE FILE NAME -> _")
0280 C
0281 1001 FORMAT (5X"DATA STORAGE ")
0282 C
0283 1002 FORMAT (5X"DATA RETRIEVAL ")
0284 C
0285 1003 FORMAT (2A2)
0286 C
0287 1004 FORMAT (A2)
0288 C
0289 1005 FORMAT (5X"THE FILE !'2A2" ALREADY EXISTS."/
0290 > 5X"TITLE ->" 40A2//
0291 > 5X"DO YOU WANT TO WRITE OVER THIS FILE ? _")
0292 C
0293 1006 FORMAT (5X"DO YOU WANT TO INPUT A NEW FILE NAME ? _")
0294 C
0295 1007 FORMAT (5X"THE FILE "2A2" DOES NOT EXIST. DO YOU WANT"/
0296 > 5X"TO INPUT A NEW FILE NAME ? _")
0297 C
0298 1009 FORMAT (5X"NOW RETRIEVING DATA FROM FILE "2A2/
0299 > 5X"TITLE ->"40A2)
0300 C
0301 1019 FORMAT (40A2)
0302 C
0303 1020 FORMAT (1X, 5F13.4)
0304 C
0305 1021 FORMAT (9 (1X,5F13.4,/),1X, 5F13.4)
0306 C
0307 1022 FORMAT (1X,F13.4)
0308 C
0309 1023 FORMAT (1X, 5I4)
0310 C
0311 1024 FORMAT (1X, 4F13.4)
0312 C
0313 1025 FORMAT (1X, 3I4)
0314 C
0315 C
0316 1030 FORMAT (1X, 3I4)
0317 C
0318 1031 FORMAT (1X, 2I4)
0319 C
0320 1032 FORMAT (1X, 5I4)
0321 C
0322 1033 FORMAT (9(1X,7I4,/),1X,7I4)
0323 C
0324 1034 FORMAT (1X, 6I4)
0325 C
0326 1035 FORMAT (1X, 8I4)
0327 C
0328 1036 FORMAT (1X, 6I4)
0329 C
0330 1037 FORMAT (1X, 8I4)
0331 C
0332 1038 FORMAT (1X, 2I4)
0333 C
0334 1040 FORMAT (1X, I4)

```

```
0335 C
0336 1041 FORMAT (1X, 5F13.4,/,5F13.4)
0337 C
0338 1042 FORMAT (5X"INPUT TITLE -> _")
0339 C
0340 1043 FORMAT (5X"HIT THE RETURN KEY TO CONTINUE ... _")
0341 C
0342 END
0343 END$
```



2SUBSD T=00004 IS ON CRO0015 USING 00051 BLKS R=0000

```
0001  FTN4
0002                      SUBROUTINE SUBSD
0003  C      FULL DISPLAY--CATEGORY 4 / SUBSOIL
0004  C
0005  C LEVEL 2
0006  C
0007  C SUBSD IS ACCESSED BY EIFD TO SCHEDULE INPUTS AND EDITS TO
0008  C CATEGORY RESPONSES, AND EDITS TO EXPECTATION OF SUCCESS
0009  C VALUES FOR CATEGORY 4 - SUBSOIL, USING FULL DISPLAY
0010  C
0011  C THE CALLING SEQUENCE IS :      CALL SUBSD
0012  C
0013  C SUBSD USES THE TCS ROUTINE :    ERASE AND HOME
0014  C
0015  C THE LOCAL VARIABLES ARE :
0016  C
0017  C      CHNG  -> ARRAY CONTAINING HEADING LETTER CHANGES
0018  C      IANS  -> ANSWER CELL
0019  C      II    -> "I" INDEX [ (I,J) ] TO SUBSOI ARRAY
0020  C      IOLD  -> PRE-EDIT CATEGORY RESPONSE VALUE
0021  C      LUORN -> LAND USE OPTION REFERENCE NUMBER
0022  C              1-> CROPLAND
0023  C              2-> NATIVE VEGETATION
0024  C              3-> WILDLIFE
0025  C              4-> WATER RECREATION
0026  C              5-> HIGH USE
0027  C              6-> OTHER
0028  C      NN    -> HEADING NUMBER
0029  C
0030  C SUBSD IS SWAPPED IN BY PROGRAM SUBSX
0031  C
0032  C THIS ROUTINE WAS WRITTEN BY GREEN
0033  C
0034  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0035  C =====
0036  C
0037  C      TEKTRONIX COMMON
0038  C
0039  C      COMMON ITEK (45)
0040  C
0041  C      LOGICAL UNITS AND COMMON LOCATION
0042  C
0043  C      COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0044  C
0045  C      POINTERS
0046  C
0047  C      COMMON EXIT  ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0048  C      COMMON IOPTN ,IOVR(7),IPNTR ,ISOC(6),ISUB(8)
0049  C      COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT ,LUO
0050  C      COMMON MODE  ,NANM ,NCLI ,NGEN ,NGRW
0051  C      COMMON NOVR  ,NSECTS ,NSOC ,NSUB ,NSUR
0052  C      COMMON NTOP  ,NU ,NVEG
0053  C
0054  C      GRADING PARAMETERS
```

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0055 C
0056 COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCPA(5)
0057 COMMON GRDVBS(5),HWHT(5,10),HWSLI(5,10),NSPP(5),PCEQ19(4)
0058 COMMON PERCNT(5,10),REHCPY(5),REHVOL(5),SLOPE(5,10),WBP
0059 C
0060 C CATEGORY TEXT
0061 C
0062 COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0063 COMMON OVRBD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0064 COMMON TPSL(49,13),VGTA(15,13)
0065 C
0066 C EXPECTATION VALUES
0067 C
0068 COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0069 COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0070 COMMON TOPSOI(33,6),VEGETA(10,6)
0071 C
0072 C CATEGORY RESPONSES
0073 C
0074 COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0075 COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0076 COMMON RTOPSO(9),RVEGET(2)
0077 C
0078 C FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0079 C
0080 COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CAHBM
0081 COMMON CABS(2),CAC,CACP,CADF,CADH
0082 COMMON CADS,CAEAF,CAHSAF,CAHSTS,CAIF
0083 COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0084 COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0085 COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0086 C
0087 INTEGER EXIT,CLMA,GDES,GWHY,OVRBD,SBSL
0088 INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0089 INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0090 INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0091 INTEGER VEGETA,ANIMAL
0092 INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0093 INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0094 INTEGER RCLTEC,TTL
0095 C
0096 INTEGER COMMON (1)
0097 EQUIVALENCE (COMMON (1), ITEK (1))
0098 EQUIVALENCE (IARY (1), LUT)
0099 EQUIVALENCE (IARY2 (1), ISTRK)
0100 EQUIVALENCE (IARY2 (2), ISECT)
0101 EQUIVALENCE (IARY2 (3), ICODE)
0102 EQUIVALENCE (IARY2 (4), LEN)
0103 C
0104 LOGICAL LER
0105 INTEGER CHNG (7)
0106 C
0107 DATA CHNG/2H B,2H C,2H D,2H E,2H F,2H G,2H H/
0108 C
0109 C
0110 C DISPLAY MODE :

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0111      1      IF (.NOT.LER) GOTO 5
0112      CALL ERASE
0113      CALL HOME
0114      5 GOTO (10,20,30) MODE
0115      10 WRITE (LUT,1010)
0116      GOTO 40
0117      20 WRITE (LUT,2010)
0118      GOTO 40
0119      30 WRITE (LUT,3010)
0120      40      IF ( MODE.GT.1 ) GOTO 50
0121      GOTO (100,200,250,300,350,400,450,500) LEXIT
0122  C      USER INPUT -> EDIT HEADING
0123      50 WRITE (LUT,2020)
0124      51 READ (LUT,2030) IANS
0125      IF (IANS.EQ.2HA ) GOTO 100
0126      IF (IANS.EQ.2HB ) GOTO 200
0127      IF (IANS.EQ.2HC ) GOTO 250
0128      IF (IANS.EQ.2HD ) GOTO 300
0129      IF (IANS.EQ.2HE ) GOTO 350
0130      IF (IANS.EQ.2HF ) GOTO 400
0131      IF (IANS.EQ.2HG ) GOTO 450
0132      IF (IANS.EQ.2HH ) GOTO 500
0133      IF (IANS.EQ.2HNO) RETURN
0134      WRITE (LUT,1200)
0135      GOTO 51
0136  C      DISPLAY HEADING A -> THICKNESS
0137      100 NN = 1
0138      L = 0
0139      J = 1
0140      IF(MODE.NE.1.AND.LER) CALL ERASE
0141      IF(MODE.NE.1.AND.LER) CALL HOME
0142      WRITE (LUT,1000) (SBSL (1), I = 1,13)
0143      WRITE (LUT,1020)
0144      WRITE (LUT,1050) (TPSL (2,1),I = 1,13)
0145      DO 101 K = 3,6
0146      WRITE (LUT,1100) (TPSL (K,I),I = 1,13), (SUBSOI (J,I),I = 1,6)
0147      101 J = J + 1
0148      GOTO (140,135,110) MODE
0149  C      EDIT EXPECTATIONS
0150  C      USER INPUT -> SUBHEADING NUMBER
0151      110 WRITE (LUT,3020)
0152      111 READ (LUT,*) II
0153      GOTO 145
0154  C      USER INPUT -> LAND USE OPTION REFERENCE NUMBER
0155      115 WRITE (LUT,3030)
0156      116 READ (LUT,*) LUORN
0157      IF (LUORN.GE.1.AND.LUORN.LE.6) GOTO 120
0158      WRITE (LUT,1200)
0159      GOTO 115
0160      120 II = II + L
0161      130 WRITE (LUT,3040)
0162      131 READ (LUT,*) SUBSOI (II,LUORN)
0163      IF (SUBSOI (II,LUORN).GE.0.AND.SUBSOI (II,LUORN).LE.4)
0164      + GOTO 600
0165      WRITE (LUT,3050)
0166      GOTO 131

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0167 C          EDIT RESPONSES
0168 135 IOLD = RSUBSO (NN)
0169 136 WRITE (LUT,2040) IOLD
0170      GOTO 144
0171 C          INPUT RESPONSES
0172 C          USER INPUT -> RSUBSO (NN)
0173 140 WRITE (LUT,2000)
0174 144 READ (LUT,*) RSUBSO (NN)
0175      IF (RSUBSO (NN).EQ.0) GOTO (900,146) MODE
0176      II = RSUBSO (NN)
0177 145      IF (II.GE.1.AND.II.LE.ISUB (NN))
0178          + GOTO (700,600,115) MODE
0179 146 WRITE (LUT,1200)
0180 147 GOTO (144,144,110) MODE
0181 C          DISPLAY HEADING B -> TEXTURE
0182 200 NN = 2
0183      J = ISUB (1) + 1
0184      L = J-1
0185      IF (.NOT.LER) GOTO 205
0186      CALL ERASE
0187      CALL HOME
0188      WRITE (LUT,1000) (SBSL (I),I = 1,13)
0189 205 WRITE (LUT,1020)
0190      WRITE (LUT,1051) CHNG (1), (TPSL (12,I),I = 2,13)
0191      DO 210 K = 13,18
0192      WRITE (LUT,1100) (TPSL (K,1),I = 1,13), (SUBSOI (J,I),I = 1,6)
0193 210 J = J + 1
0194      GOTO(140,135,110) MODE
0195 C          DISPLAY HEADING C -> STRUCTURE
0196 250 NN = 3
0197      J = ISUB (1) + ISUB (2) + 1
0198      L = J-1
0199      IF (.NOT.LER) GOTO 255
0200      CALL ERASE
0201      CALL HOME
0202 254 WRITE (LUT,1000) (SBSL (1),I = 1,13)
0203 255 WRITE (LUT,1020)
0204      WRITE (LUT,1051) CHNG (2), (TPSL (19,I),I = 2,13)
0205      WRITE (LUT,1050) (TPSL (20,I),I = 1,13)
0206      DO 260 K = 21,23
0207      WRITE (LUT,1100) (TPSL (K,I),I = 1,13), (SUBSOI (J,I),I = 1,6)
0208 260 J = J + 1
0209      GOTO(140,135,110) MODE
0210 C          DISPLAY HEADING D -> BULK DENSITY
0211 300 NN = 4
0212      J = ISUB (1) + ISUB (2) + ISUB (3) + 1
0213      L = J-1
0214      IF (.NOT.LER) GOTO 305
0215      CALL ERASE
0216      CALL HOME
0217      WRITE (LUT,1000) (SBSL (1),I = 1,13)
0218 305 WRITE (LUT,1020)
0219      WRITE (LUT,1051) CHNG (3), (TPSL (24,I),I = 2,13)
0220      WRITE (LUT,1050) (TPSL (25,I),I = 1,13)
0221      DO 310 K = 26,27
0222      WRITE (LUT,1100) (TPSL (K,I),I = 1,13), (SUBSOI (J,I),I = 1,6)

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0223      310 J = J + 1
0224          GOTO(140,135,110) MODE
0225 C          DISPLAY HEADING E -> SALINITY
0226      350 NN = 5
0227          J = ISUB (1) + ISUB (2) + ISUB (3) + ISUB (4) + 1
0228          L = J-1
0229          IF (.NOT.LER) GOTO 355.
0230          CALL ERASE
0231          CALL HOME
0232          WRITE (LUT,1000) (SBSL (1),I = 1,13)
0233      355 WRITE (LUT,1020)
0234          WRITE (LUT,1051) CHNG (4), (TPSL (28,1),I = 2,13)
0235          DO 360 K = 29,33
0236          WRITE (LUT,1100) (TPSL (K,1),I = 1,13), (SUBSOI (J,I),I = 1,6)
0237      360 J = J + 1
0238          GOTO(140,135,110) MODE
0239 C          DISPLAY HEADING F -> SODIUM ADSORPTION RATIO
0240      400 NN = 6
0241          J = ISUB (1) + ISUB (2) + ISUB (3) + ISUB (4) + ISUB (5) + 1
0242          L = J-1
0243          IF (.NOT.LER) GOTO 405
0244          CALL ERASE
0245          CALL HOME
0246      404 WRITE (LUT,1000) (SBSL (1),I = 1,13)
0247      405 WRITE (LUT,1020)
0248          WRITE (LUT,1051) CHNG (5), (TPSL (34,I),I = 2,13)
0249          WRITE (LUT,1050) (TPSL (35,I),I = 1,13)
0250          DO 410 K = 36,39
0251          WRITE (LUT,1100) (TPSL (K,1),I = 1,13), (SUBSOI (J,I),I = 1,6)
0252      410 J = J + 1
0253          GOTO(140,135,110) MODE
0254 C          DISPLAY HEADING G -> NITROGEN
0255      450 NN = 7
0256          J = ISUB (1) + ISUB (2) + ISUB (3) + ISUB (4) + ISUB (5) +
0257          + ISUB (6) + 1
0258          L = J-1
0259          IF (.NOT.LER) GOTO 455
0260          CALL ERASE
0261          CALL HOME
0262          WRITE (LUT,1000) (SBSL (1),I = 1,13)
0263      455 WRITE (LUT,1020)
0264          WRITE (LUT,1051) CHNG (6), (TPSL (40,I),I = 2,13)
0265          WRITE (LUT,1050) (TPSL (41,I),I = 1,13)
0266          DO 460 K = 42,44
0267          WRITE (LUT,1100) (TPSL (K,1),I = 1,13), (SUBSOI (J,I),I = 1,6)
0268      460 J = J + 1
0269          GOTO(140,135,110) MODE
0270 C          DISPLAY HEADING H -> PHOSPHORUS
0271      500 NN = 8
0272          J = ISUB (1) + ISUB (2) + ISUB (3) + ISUB (4) + ISUB (5) +
0273          + ISUB (6) + ISUB (7) + 1
0274          L = J-1
0275          IF (.NOT.LER) GOTO 505
0276          CALL ERASE
0277          CALL HOME
0278          WRITE (LUT,1000) (SBSL (1),I = 1,13)

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0279      505 WRITE (LUT,1020)
0280      WRITE (LUT,1051) CHNG (7), (TPSL (45,1),I = 2,13)
0281      WRITE (LUT,1050) (TPSL (46,1),I = 1,13)
0282      DO 510 K = 47,49
0283      WRITE (LUT,1100) (TPSL (K,1),I = 1,13), (SUBSOI (J,I),I = 1,6)
0284      510 J = J + 1
0285      GOTO(140,135,110) MODE
0286 C      USER INPUT -> MORE EDITS ?
0287 C
0288      600 WRITE (LUT,3060)
0289      READ (LUT,2030) IANS
0290      IF (IANS.NE.2HYES) RETURN
0291      GOTO 1
0292 C      INPUT MODE -> DIRECT TO PROPER HEADING
0293 C
0294      700 IF (NN.EQ.NSUB) RETURN
0295      GOTO (200,250,300,350,400,450,500) NN
0296 C
0297 C      USER WANTS OUT -> SET EXIT TO ZERO AND RETURN
0298 C
0299      900 EXIT = 0
0300      RETURN
0301 C
0302 C      FORMAT STATEMENTS
0303 C
0304      1000 FORMAT ( 13A2,44 ("*"),/,26X,"*",
0305      &10X,"STANDARD EXPECTATIONS",11X,"*",/,
0306      &26X,44 ("*"),/,26X,"*CROP*",2X,
0307      &"NATIVE",2X,"*WILD*",2X,"WATER",3X,
0308      &"*HIGH*OTHER*",/,26X,
0309      &"*LAND*VEGETATION*LIFE*RECREATION*USE *",5X,"*")
0310 C
0311      1020 FORMAT (70 ("*"),/,26X,"*"4X"*"10X"*"4X"*"10X"*"4X"*"5X"*)
0312 C
0313      1025 FORMAT ( "ACTUAL THICKNESS OF SUBSOIL (FEET) -> _")
0314 C
0315      1050 FORMAT (13A2,"*",4X,"*",10X,"*",4X,"*",
0316      &10X,"*",4X,"*",5X,"*")
0317 C
0318      1100 FORMAT (13A2,
0319      &"* "I1" * "I1" * "I1" * "I1" * "I1" * "I1" *)
0320 C
0321      1200 FORMAT (/ "YOU HAVE TYPED IN AN ILLEGAL ANSWER.",
0322      &/, "GIVE HER ANOTHER SHOT -> _")
0323 C
0324      1051 FORMAT (A2,12A2,"*",4X,"*",10X,"*",4X,"*",
0325      &10X,"*",4X,"*",5X,"*")
0326 C
0327      2000 FORMAT ("ENTER THE APPROPRIATE",5X,
0328      &44 ("*"),/, "NUMBER, OR ZERO TO QUIT -> _")
0329 C
0330      1010 FORMAT ( 17X"INPUT RESPONSES/SUBSOIL"//)
0331 C
0332      2010 FORMAT ( 17X"EDIT RESPONSES/SUBSOIL"//)
0333 C
0334      3010 FORMAT ( 17X"EDIT EXPECTATIONS/SUBSOIL"//)

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0335 C
0336 C
0337 2020 FORMAT (5X"IN WHICH HEADING IS YOUR DESIRED EDIT ?"/,
0338      &5X" (ENTER A,B,C,D,E,F,G,H, OR NONE) -> _")
0339 C
0340 2030 FORMAT (A2)
0341 C
0342 2040 FORMAT (5X"YOUR CURRENT RESPONSE IS ->"I2, //
0343      &5X"ENTER YOUR NEW RESPONSE HERE -> _")
0344 C
0345 3020 FORMAT (5X"IN WHICH SUB-HEADING IS THE EXPECTATION VALUE"/,
0346      &5X"YOU WISH TO CHANGE ? (ENTER THE APPROPRIATE NUMBER)-> _")
0347 C
0348 3030 FORMAT(/5X"SELECT THE LAND USE OPTION YOU WISH TO CHANGE"/
0349      > 1X" -1- / -2- / -3- / -4- / -5- / -6- /"/
0350      > 1X"CROPLAND/NAT.VEG./WILDLIFE/WAT.REC./HIGH USE/ OTHER/"
0351      >/5X"ENTER YOUR SELECTION HERE -> _")
0352 C
0353 3040 FORMAT (5X"ENTER YOUR NEW EXPECTATION VALUE HERE -> _")
0354 C
0355 3050 FORMAT (/, 5X"ERROR--> YOUR EXPECTATION VALUE MUST BE"/,
0356      &5X"0,1,2,3, OR 4 TO AVOID INTRODUCING A BIAS -> _")
0357 C
0358 3060 FORMAT (5X"ANY MORE EDITS TO SUBSOIL ? (YES OR NO)-> _")
0359 C
0360 C
0361      END
0362 END$

```

&SURHY T=00004 IS ON CR00015 USING 00047 BLKS R=0000

```
0001  FTN4
0002                      SUBROUTINE SURHY
0003  C      FULL DISPLAY--CATEGORY 6      SURFACE WATER HYDROLOGY
0004  C
0005  C LEVEL 2
0006  C
0007  C SURHY IS ACCESSED BY EIFD TO SCHEDULE INPUTS AND EDITS TO
0008  C CATEGORY RESPONSES, AND EDITS TO EXPECTATION OF SUCCESS
0009  C VALUES FOR CATEGORY 6 - SURFACE WATER HYDROLOGY, USING
0010  C FULL DISPLAY.
0011  C
0012  C THE CALLING SEQUENCE IS :          CALL SURHY
0013  C
0014  C SURHY USES THE TCS ROUTINES :  ERASE AND HOME
0015  C
0016  C THE LOCAL VARIABLES ARE:
0017  C
0018  C      IANS  -> ANSWER CELL
0019  C      II    -> "I" INDEX I (I,J) J TO SURHYD ARRAY
0020  C      IOLD  -> PRE-EDIT CATEGORY RESPONSE VALUE
0021  C      LUORN -> LAND USE OPTION REFERENCE NUMBER
0022  C              1-> CROPLAND
0023  C              2-> NATIVE VEGETATION
0024  C              3-> WILDLIFE
0025  C              4-> WATER RECREATION
0026  C              5-> HIGH USE
0027  C              6-> OTHER
0028  C      NN    -> HEADING NUMBER
0029  C
0030  C SURHY IS SWAPPED IN BY PROGRAM SURHX
0031  C
0032  C THIS ROUTINE WAS WRITTEN BY GREEN
0033  C
0034  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0035  C =====
0036  C
0037  C      TEKTRONIX COMMON
0038  C
0039  C      COMMON ITEK (45)
0040  C
0041  C      LOGICAL UNITS AND COMMON LOCATION
0042  C
0043  C      COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0044  C
0045  C      POINTERS
0046  C
0047  C      COMMON EXIT      ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0048  C      COMMON IOPTN     ,IOVR(7),IPNTR ,ISOC(6),ISUB(8)
0049  C      COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT ,LUO
0050  C      COMMON MODE      ,NANM ,NCLI ,NGEN ,NGRW
0051  C      COMMON NOVR      ,NSECTS ,NSOC ,NSUB ,NSUR
0052  C      COMMON NTOP      ,NU ,NVEG
0053  C
0054  C      GRADING PARAMETERS
```

```

0055 C
0056 COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,BCPA(5)
0057 COMMON GRDVBS(5),HWHT(5,10),HWSL1(5,10),NSPP(5),PCEQ19(4)
0058 COMMON PERCNT(5,10),REHCPY(5),REHVOL(5),SLOPE(5,10),WBF
0059 C
0060 C CATEGORY TEXT
0061 C
0062 COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0063 COMMON OVBD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0064 COMMON TPSSL(49,13),VGTA(15,13)
0065 C
0066 C EXPECTATION VALUES
0067 C
0068 COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0069 COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0070 COMMON TOPSOI(33,6),VEGETA(10,6)
0071 C
0072 C CATEGORY RESPONSES
0073 C
0074 COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0075 COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0076 COMMON RTOPSO(9),RVEGET(2)
0077 C
0078 C FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0079 C
0080 COMMON CAAHM,CABAH,CABFN(3),CABFF(3),CAHBM
0081 COMMON CABS(2),CAC,CACP,CADF,CADH
0082 COMMON CADS,CAEAF,CAHSAF,CAHSTS,CAIF
0083 COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0084 COMMON CSTRP,FAVG(5),PFSTSP,PFAC,ROLTEC(29,34)
0085 COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0086 C
0087 INTEGER EXIT,CLMA,GDES,GWHY,OVBD,SBSL
0088 INTEGER SCEC,SWHY,TPSSL,VGTA,ANIM
0089 INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0090 INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0091 INTEGER VEGETA,ANIMAL
0092 INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0093 INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0094 INTEGER ROLTEC,TTL
0095 C
0096 INTEGER COMMON (1)
0097 EQUIVALENCE (COMMON (1), ITEK (1))
0098 EQUIVALENCE (IARY (1), LUT)
0099 EQUIVALENCE (IARY2 (1), ISTRK)
0100 EQUIVALENCE (IARY2 (2), ISECT)
0101 EQUIVALENCE (IARY2 (3), ICODE)
0102 EQUIVALENCE (IARY2 (4), LEN)
0103 C
0104 C LOGICAL LER
0105 C
0106 C DISPLAY MODE
0107 1 IF (.NOT.LER) GOTO 5
0108 CALL ERASE
0109 CALL HOME
0110 5 GOTO (10,20,30) MODE

```



```

0111      10 WRITE (LUT,1010)
0112          GOTO 40
0113      20 WRITE (LUT,2010)
0114          GOTO 40
0115      30 WRITE (LUT,3010)
0116      40      IF (MODE.GT.1) GOTO 50
0117          GOTO (100,200,300,400,500,600) LEXIT
0118 C          USER INPUT -> EDIT HEADING
0119      50 WRITE (LUT,2020)
0120      51 READ (LUT,2030) IANS
0121          IF (IANS.EQ.2HA ) GOTO 100
0122          IF (IANS.EQ.2HB ) GOTO 200
0123          IF (IANS.EQ.2HC ) GOTO 300
0124          IF (IANS.EQ.2HD ) GOTO 400
0125          IF (IANS.EQ.2HE ) GOTO 500
0126          IF (IANS.EQ.2HF ) GOTO 600
0127          IF (IANS.EQ.2HND) RETURN
0128          WRITE (LUT,1200)
0129          GOTO 51
0130 C          EDIT EXPECTATIONS
0131 C          USER INPUT -> SUBHEADING NUMBER
0132      55 WRITE (LUT,3020)
0133      56 READ (LUT,*) II
0134          GOTO 90
0135 C          USER INPUT -> LAND USE OPTION REFERENCE NUMBER
0136      60 WRITE (LUT,3030)
0137      61 READ (LUT,*) LUORN
0138          IF (LUORN.GE.1.AND.LUORN.LE.6) GOTO 65
0139          WRITE (LUT,1200)
0140          GOTO 61
0141      65 II = II + L
0142 C          USER INPUT -> EXPECTATION VALUE
0143      70 WRITE (LUT,3040)
0144      71 READ (LUT,*) SURHYD (II,LUORN)
0145          IF (SURHYD (II,LUORN).GE.0.AND.SURHYD (II,LUORN).LE.4)
0146      + GOTO 700
0147          WRITE (LUT,3050)
0148          GOTO 71
0149 C          EDIT RESPONSES
0150      75 IOLD = RSURHY (NN)
0151      77 WRITE (LUT,2040) IOLD
0152          GOTO 85
0153 C          INPUT RESPONSES
0154 C          USER INPUT -> RSURHY (NN)
0155      80 WRITE (LUT,2000)
0156      85 READ (LUT,*) RSURHY (NN)
0157          II = RSURHY (NN)
0158          IF (II.EQ.0) GOTO (900,91) MODE
0159      90      IF (II.GE.1.AND.II.LE.ISUR (NN)) GOTO (800,700,60) MODE
0160      91 WRITE (LUT,1200)
0161          GOTO (85,85,56) MODE
0162 C          DISPLAY HEADING A -> SURFACE WATER
0163      100 NN = 1
0164          J = 1
0165          L = J-1
0166          IF (MODE.EQ.1.OR..NOT.LER) GOTO 110

```

```

0167      CALL ERASE
0168      CALL HOME
0169      110 WRITE (LUT,999) (SWHY (1,I),I = 1,13)
0170      WRITE (LUT,1000) (SWHY (2,I),I = 1,13)
0171      WRITE (LUT,1020)
0172      WRITE (LUT,1050) ( (SWHY (K,I),I = 1,13),K = 3,6)
0173      DO 115 K = 7,10
0174      WRITE (LUT,1100) (SWHY (K,I),I = 1,13), (SURHYD (J,I),I = 1,6)
0175      115 J = J + 1
0176      120 GOTO (80,75,55) MODE
0177  C      DISPLAY HEADING B -> AMOUNT OF WATER
0178      200 NN = 2
0179      J = ISUR (1) + 1
0180      L = J-1
0181      IF (.NOT.LER) GOTO 210
0182      CALL ERASE
0183      CALL HOME
0184      WRITE (LUT,999) (SWHY (1,I),I = 1,13)
0185      WRITE (LUT,1000) (SWHY (2,I),I = 1,13)
0186      210 WRITE (LUT,1020)
0187      WRITE (LUT,1050) ( (SWHY (K,I),I = 1,13),K = 11,19)
0188      DO 215 K = 20,24
0189      WRITE (LUT,1100) (SWHY (K,I),I = 1,13), (SURHYD (J,I),I = 1,6)
0190      215 J = J + 1
0191      GOTO 120
0192  C      DISPLAY HEADING C -> INDEX OF DISSECTION
0193      300 NN = 3
0194      J = ISUR (1) + ISUR (2) + 1
0195      L = J-1
0196      IF (.NOT.LER) GOTO 310
0197      CALL ERASE
0198      CALL HOME
0199      WRITE (LUT,999) (SWHY(1,I),I = 1,13)
0200      WRITE (LUT,1000) (SWHY(2,I),I=1,13)
0201      310 WRITE (LUT,1020)
0202      WRITE (LUT,1050) (SWHY (25,I),I = 1,13)
0203      DO 315 K = 26,28
0204      WRITE (LUT,1100) (SWHY (K,I),I = 1,13), (SURHYD (J,I),I = 1,6)
0205      315 J = J + 1
0206      GOTO 120
0207  C      DISPLAY HEADING D -> INDEX OF MEANDER
0208      400 NN = 4
0209      J = ISUR (1) + ISUR (2) + ISUR (3) + 1
0210      L = J-1
0211      IF (.NOT.LER) GOTO 410
0212      CALL ERASE
0213      CALL HOME
0214      WRITE (LUT,999) (SWHY (1,I),I = 1,13)
0215      WRITE (LUT,1000) (SWHY (2,I),I = 1,13)
0216      410 WRITE (LUT,1020)
0217      WRITE (LUT,1050) (SWHY (29,I),I = 1,13)
0218      DO 415 K = 30,32
0219      WRITE (LUT,1100) (SWHY (K,I),I = 1,13), (SURHYD (J,I),I = 1,6)
0220      415 J = J + 1
0221      GOTO 120
0222  C      DISPLAY HEADING E -> SALINITY

```

```

0223      500 NN = 5
0224          J = ISUR (1) + ISUR (2) + ISUR (3) + ISUR (4) + 1
0225          L = J-1
0226          IF (.NOT.LER) GOTO 510
0227          CALL ERASE
0228          CALL HOME
0229          WRITE (LUT,999) (SWHY (1,I),I = 1,13)
0230          WRITE (LUT,1000) (SWHY (2,I),I = 1,13)
0231      510 WRITE (LUT,1020)
0232          WRITE (LUT,1050) ( (SWHY (K,I),I = 1,13),K = 33,34)
0233          DO 515 K = 35,38
0234          WRITE (LUT,1100) (SWHY (K,I),I = 1,13), (SURHYD (J,I),I = 1,6)
0235      515 J = J + 1
0236          GOTO 120
0237  C          DISPLAY HEADING F -> SODIUM ADSORPTION RATIO
0238      600 NN = 6
0239          J = ISUR (1) + ISUR (2) + ISUR (3) + ISUR (4) + ISUR (5) + 1
0240          L = J-1
0241          IF (.NOT.LER) GOTO 610
0242          CALL ERASE
0243          CALL HOME
0244          WRITE (LUT,999) (SWHY (1,I),I = 1,13)
0245          WRITE (LUT,1000) (SWHY (2,I),I = 1,13)
0246      610 WRITE (LUT,1020)
0247          WRITE (LUT,1050) ( (SWHY (K,I),I = 1,13),K = 39,40)
0248          DO 615 K = 41,44
0249          WRITE (LUT,1100) (SWHY (K,I),I = 1,13), (SURHYD (J,I),I = 1,6)
0250      615 J = J + 1
0251          GOTO 120
0252  C          USER INPUT -> MORE EDITS ?
0253      700 WRITE (LUT,3060)
0254          READ (LUT,2030) IANS
0255          IF (IANS.NE.2HYE) RETURN
0256          GOTO 1
0257  C          INPUT MODE -> DIRECT TO PROPER HEADING
0258      800 IF (NN.EQ.NSUR) RETURN
0259          GOTO (200,300,400,500,600) NN
0260  C          USER WANTS OUT -> SET EXIT TO ZERO AND RETURN
0261      900 EXIT = 0
0262          RETURN
0263  C          FORMAT STATEMENTS
0264      999 FORMAT ( 13A2)
0265  C
0266     1000 FORMAT (13A2,44 ("*"),/,26X,"*",
0267          &10X,"STANDARD EXPECTATIONS",11X,"*",/,
0268          &26X,44 ("*"),/,26X,"*CROP*",2X,
0269          &"NATIVE",2X,"*WILD*",2X,"WATER",3X,
0270          &"*HIGH*OTHER*",/,26X,
0271          &"*LAND*VEGETATION*LIFE*RECREATION*USE *",5X,"*")
0272  C
0273     1020 FORMAT (70 ("*"),/,26X,"*"4X"*"10X"*"4X"*"10X"*"4X"*"5X"*)
0274  C
0275     1050 FORMAT (13A2,"*",4X,"*",10X,"*",4X,"*",
0276          &10X,"*",4X,"*",5X,"*")
0277  C
0278     1100 FORMAT (13A2,

```



```

0279      &"* "11" * "11" * "11" * "11" * "11" *)
0280 C
0281 1200 FORMAT (/ "YOU HAVE TYPED IN AN ILLEGAL ANSWER.",
0282      &/, "GIVE HER ANOTHER SHOT -> _")
0283 C
0284 2000 FORMAT ("ENTER THE APPROPRIATE"5X,
0285      &44 ("*"),/, "NUMBER, OR ZERO TO QUIT -> _")
0286 C
0287 1010 FORMAT ( 15X"INPUT RESPONSES/SURFACE WATER HYDROLOGY"/)
0288 C
0289 2010 FORMAT ( 15X"EDIT RESPONSES/SURFACE WATER HYDROLOGY"/)
0290 C
0291 3010 FORMAT ( 15X"EDIT EXPECTATIONS/SURFACE WATER HYDROLOGY"/)
0292 C
0293 2020 FORMAT (5X"IN WHICH HEADING IS YOUR DESIRED EDIT?"/,
0294      &5X" (ENTER A,B,C,D,E,F, OR NONE) -> _")
0295 C
0296 2030 FORMAT (A2)
0297 C
0298 2040 FORMAT (5X"YOUR CURRENT RESPONSE IS -> "I2, //
0299      &5X"ENTER YOUR NEW RESPONSE HERE -> _")
0300 C
0301 3020 FORMAT (5X"IN WHICH SUB-HEADING IS THE EXPECTATION VALUE"/,
0302      &5X"YOU WISH TO CHANGE ? (ENTER THE APPROPRIATE NUMBER) -> _")
0303 C
0304 3030 FORMAT(/5X"SELECT THE LAND USE OPTION YOU WISH TO CHANGE"/
0305      > 1X" -1- / -2- / -3- / -4- / -5- / -6- /"/
0306      > 1X"CROPLAND/NAT.VEG./WILDLIFE/WAT.REC./HIGH USE/ OTHER/"
0307      >/5X"ENTER YOUR SELECTION HERE -> _")
0308 C
0309 3040 FORMAT (5X"ENTER YOUR NEW EXPECTATION VALUE HERE -> _")
0310 C
0311 3050 FORMAT (/, 5X"ERROR--> YOUR EXPECTATION VALUE MUST BE"/,
0312      %5X"0,1,2,3, OR 4 TO AVOID INTRODUCING A BIAS -> _")
0313 C
0314 3060 FORMAT (5X,"ANY MORE EDITS TO SURFACE WATER HYDROLOGY?"/,
0315      &5X" (YES OR NO) = > _")
0316 C
0317 C
0318 END
0319 END$

```

BTABLE T=00004 IS ON CRO0015 USING 00002 BLKS R=0012

```
0001  FTH4
0002      BLOCK DATA TABLE
0003  C
0004  C LABEL COMMON TABLE IS USED BY THE DRAGLINE GRABING ROUTINES
0005  C BLCE,BLRE,BULB,GRAB,AXES,BLOCC,BLOCH, AND BLOC
0006  C
0007  C
0008      COMMON /TABLE/
0009          >          TBLV, TBLT, TBLA, TBLG, JCOUNT,TOMIN,RODE,
0010          >          TOMAX,TUMIN,TUMAX,TAMIN,TAMAX,TTMIN,TTMAX
0011  C
0012      DIMENSION TBLV(12),TBLT(12),TBLA(12),TBLG(12)
0013      END
0014  END*
```

8TC0N0 I=00004 IS ON CR00015 USING 00017 BLKS R=0000

```
0001  ITN4
0002  C ===== SUBROUTINE TC0N0 =====
0003  C =
0004  C =          TC0N - CHECK FOR MANDATORY OR FORBIDDEN OPTIONS
0005  C =
0006  C = SOURCE FILE : 8TC0N0          OBJECT FILE : %TC0N0
0007  C =====
0008  C
0009  C
0010  C DESCRIPTION:
0011  C
0012  C          TC0N0 CHECKS FOR THOSE ENVIRONMENTAL ENTRIES THAT CAUSE
0013  C          A LAND USE OPTION TO BE MANDATORY OR FORBIDDEN.
0014  C
0015  C CALLING SEQUENCE:
0016  C
0017  C          CALL TC0N0 (IFLCK)
0018  C
0019  C ARGUMENTS:
0020  C
0021  C          IFLCK -> FLAG CHECK ARRAY. SET TO 1 IF CONDITION EXISTS
0022  C
0023  C ACCEDED BY:
0024  C
0025  C          TC0N
0026  C
0027  C SUBROUTINES SCHEDULED : NONE
0028  C
0029  C LOCAL VARIABLES:      NONE
0030  C
0031  C
0032  C AUTHOR:                ORVILLE D. GREEN
0033  C
0034  C ***** CLAIM RELEASE 1.0   APRIL 1, 1980 *****
0035  C
0036  C
0037  C =====
0038  C
0039  C
0040  C          SUBROUTINE TC0N0 (IFLCK)
0041  C
0042  C
0043  C          TEKTRONIX COMMON
0044  C
0045  C          COMMON ITER (45)
0046  C
0047  C          LOGICAL UNITS AND COMMON LOCATION
0048  C
0049  C          COMMON IARY1(5),IARY2(5),LER,LUF,LUL
0050  C
0051  C          POINTERS
0052  C
0053  C          COMMON EXIT  ,IARR(3),ICL1(2),ICEN(3),ICRW(5)
0054  C          COMMON IOTN  ,ICOR(7),IPATH ,ICSD(4),ICSD(5)
```



```

0055      COMMON IOUR(6),ITOP(9),IVEC(2),LEXIT ,LUB
0056      COMMON NODE ,NAHM ,NCL1 ,NCEH ,NCRW
0057      COMMON HOUR ,NCECTS ,NCEC ,NCEB ,NCEU
0058      COMMON RTOP ,RU ,RVEC
0059      C
0060      C GRADING PARAMETERS
0061      C
0062      COMMON AREA(5),DENLEN(5,10),DENWI(5,10),COCO,CCPA(5)
0063      COMMON ORDVDC(5),HWHI(5,10),HWOL1(5,10),NOFF(5),PCER19(4)
0064      COMMON PERCAT(5,10),REHCFY(5),REHVOL(5),SLOPE(5,10),WBF
0065      C
0066      C CATEGORY TEXT
0067      C
0068      COMMON ANIM(23,13),CLMA(13,13),CEEC(15,13),GWHY(22,13)
0069      COMMON OVDB(11,13),SBOL(13), SCEC(33,13),SWHY(44,13)
0070      COMMON TPOL(47,13),VSTA(15,13)
0071      C
0072      C EXPECTATION VALUES
0073      C
0074      COMMON ANIMAL(13,6),CLIMAT(0,6),CEHDEC(0,6),GRWHYB(19,6)
0075      COMMON OVRDBN(20,6),SOCECN(29,6),SUBSOI(30,6),SURHYB(23,6)
0076      COMMON TOPSOI(33,6),VEGETA(10,6)
0077      C
0078      C CATEGORY RESPONSES
0079      C
0080      COMMON RANIMA(3),ROLIMA(2),RCENDE(3),RGRWHY(5)
0081      COMMON ROVRDB(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0082      COMMON RTOPSO(9),RVEGET(2)
0083      C
0084      C PLANT,TECON,GRUPE SUBSYSTEM PARAMETERS
0085      C
0086      COMMON CAAMH,CABAH,CABFN(3),CABFP(3),CABUM
0087      COMMON CABD(2),CAC,CADP,CADP,CABH
0088      COMMON CABD,CACAF,CAHCAF,CAHOTS,CAIP
0089      COMMON CAR3FC,CACF,CACNC,CSTES,CSTRM
0090      COMMON CSTRP,FAVG(5),PFCTOP,PFAC,RLTEC(27,34)
0091      COMMON TCAR(5),THICK(10),YHKS,TTL(40)
0092      C
0093      INTEGER EXIT,CLMA,CEEC,GWHY,OVDB,SBOL
0094      INTEGER SCEC,SWHY,TPSL,VSTA,ANIM
0095      INTEGER CLIMAT,CEHDEC,GRWHYB,OVRRBN
0096      INTEGER SOCECN,SUBSOI,SURHYB,TOPSOI
0097      INTEGER VEGETA,ANIMAL
0098      INTEGER ROLIMA,RCENDE,RGRWHY,ROVRDB,RSOCEC
0099      INTEGER ROUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0100      INTEGER RLTEC,TTL
0101      C
0102      INTEGER COMMON (1)
0103      EQUIVALENCE (COMMON (1), ITEX (1))
0104      EQUIVALENCE (IARY (1), LUT)
0105      EQUIVALENCE (IARY2 (1), IOTRK)
0106      EQUIVALENCE (IARY2 (2), ICECT)
0107      EQUIVALENCE (IARY2 (3), ICODE)
0108      EQUIVALENCE (IARY2 (4), LEN)
0109      C
0110      LOGICAL LLR

```

```

0111 C
0112 C
0113     INTEGER IFLCK (6)
0114 C
0115 C Set flag check array to zero
0116 C
0117     DO 10 I = 1,6
0118     10 IFLCK(I) = 0
0119 C
0120 C Condition 1
0121 C
0122     IF(RGENDE(1).EQ.1.AND.RGENDE(2).EQ.3) IFLCK(1) = 1
0123     IF (RGENDE (1).EQ.1.AND.RGENDE(2).EQ.1) IFLCK(1) = 1
0124 C
0125 C Condition 2
0126 C
0127     IF(RGENDE(1).EQ.1.AND.RGENDE(3).EQ.3) IFLCK(2) = 1
0128 C
0129 C Condition 3
0130 C
0131     IF(RVEGET (1).EQ.5) IFLCK(3) = 1
0132 C
0133 C Condition 4
0134 C
0135     IF(RANIMA (1).EQ.5) IFLCK(4) = 1
0136 C
0137 C Condition 5
0138 C
0139     IF(RSOCEC (2).EQ.1) IFLCK(5) = 1
0140 C
0141 C Condition 6
0142 C
0143     IF(RGRWHY (5).EQ.1) IFLCK(6) = 1
0144 C
0145 C NOTE : Condition 7 is checked in TECON
0146 C
0147     RETURN
0148     END
0149 ENDD

```

&TCON1 Y=00004 IS ON CRO0015 USING 00018 BLKS R=0000

```

0001  FTN4
0002  C ===== SUBROUTINE TCON1 =====
0003  C =
0004  C =          TECON: BAD TOPSOIL CHECK
0005  C =
0006  C = SOURCE FILE : &TCON1          OBJECT FILE : &TCON1
0007  C =====
0008  C
0009  C
0010  C DESCRIPTION:
0011  C
0012  C     TCON1 CHECKS FOR THOSE ENVIRONMENTAL PARAMETERS THAT INDICATE
0013  C     THE PRESENCE OF A BAD TOPSOIL LAYER
0014  C
0015  C CALLING SEQUENCE:
0016  C
0017  C     CALL TCON1 (ICHECK)
0018  C
0019  C ARGUMENTS:
0020  C
0021  C     ICHECK -> SET TO ONE IF BAD TOPSOIL IS PRESENT
0022  C
0023  C ACCESSED BY:
0024  C
0025  C     TECON
0026  C
0027  C SUBROUTINES SCHEDULED:      NONE
0028  C
0029  C LOCAL VARIABLES:           NONE
0030  C
0031  C
0032  C AUTHOR:                     ORVILLE D. GREEN
0033  C
0034  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0035  C
0036  C
0037  C =====
0038  C
0039  C
0040  C     SUBROUTINE TCON1 (ICHECK)
0041  C
0042  C
0043  C     TEKTRONIX COMMON
0044  C
0045  C     COMMON ITER (45)
0046  C
0047  C     LOGICAL UNITS AND COMMON LOCATION
0048  C
0049  C     COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0050  C
0051  C     POINTERS
0052  C
0053  C     COMMON EXIT      ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0054  C     COMMON IOPTN     ,IOVR(7),IPNTR  ,ISOC(6),ISUB(8)

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```

0055      COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT ,LUC
0056      COMMON MODE ,NANM ,NCLI ,NSEN ,NSRW
0057      COMMON NOVR ,NSECTS ,NSOC ,NSUB ,NSUR
0058      COMMON NTOP ,NU ,NVEG
0059      C
0060      C GRADING PARAMETERS
0061      C
0062      COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCPA(5)
0063      COMMON GRDVB(5),HWHT(5,10),HWSLI(5,10),NSFP(5),PCER19(4)
0064      COMMON PERCNT(5,10),REHCPY(5),REHVOL(5),SLOPE(5,10),WBF
0065      C
0066      C CATEGORY TEXT
0067      C
0068      COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0069      COMMON OVB(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0070      COMMON TPSL(47,13),VSTA(15,13)
0071      C
0072      C EXPECTATION VALUES
0073      C
0074      COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0075      COMMON OVRBDN(28,6),SDCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0076      COMMON TOPSOI(33,6),VEGETA(10,6)
0077      C
0078      C CATEGORY RESPONSES
0079      C
0080      COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0081      COMMON ROVRBD(7,10),RSDCEC(6),RSUBSO(8),RSURHY(6)
0082      COMMON RTOPSO(9),RVEGET(2)
0083      C
0084      C FEACI,TECON,OPUSE SUBSYSTEM PARAMETERS
0085      C
0086      COMMON CAAHM,CADAH,CABFN(3),CABFP(3),CABIM
0087      COMMON CABS(2),CAC,CACP,CADF,CABH
0088      COMMON CABS,CACAF,CAHSAP,CAHSTC,CAIP
0089      COMMON CARZFC,CASF,CASNC,CSTES,CSTRM
0090      COMMON CSTRP,FAVC(5),PFSTSP,PFAC,RCLTEC(29,34)
0091      COMMON TCAR(5),THICK(10),THKYS,TTL(40)
0092      C
0093      INTEGER EXIT,CLMA,GDES,GWHY,OVB,SBSL
0094      INTEGER SCEC,SWHY,TPSL,VSTA,ANIM
0095      INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0096      INTEGER SDCECN,SUBSOI,SURHYD,TOPSOI
0097      INTEGER VEGETA,ANIMAL
0098      INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSDCEC
0099      INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0100      INTEGER RCLTEC,TTL
0101      C
0102      INTEGER COMMON (1)
0103      EQUIVALENCE (COMMON (1), ITEX (1))
0104      EQUIVALENCE (IARY (1), LUT)
0105      EQUIVALENCE (IARY2 (1), ISTRK)
0106      EQUIVALENCE (IARY2 (2), ISECT)
0107      EQUIVALENCE (IARY2 (3), ICODE)
0108      EQUIVALENCE (IARY2 (4), LEN)
0109      C
0110      LOGICAL LER

```

```

0111 C
0112 C
0113 C
0114 C
0115 C Set flag to zero
0116 C
0117         ICHECK = 0
0118 C
0119 C Direct to LUD
0120 C
0121         GOTO(10,20,20,20,30) LUD
0122 C
0123 C Check cropland conditions
0124 C
0125         10 IF(RTOPSO(1) .EQ. 1 .OR. RTOPSO(2) .EQ. 1
0126             &.OR. RTOPSO(3) .EQ. 1 .OR. RTOPSO(3) .GE. 5
0127             &.OR. RTOPSO(6) .GE. 3 .OR. RTOPSO(7) .GE. 3) ICHECK = 1
0128             RETURN
0129 C
0130 C Check native vegetation, wildlife, and water recreation conditions
0131 C
0132         20 IF(RTOPSO(1) .EQ. 1 .OR. RTOPSO(2) .EQ. 1
0133             &.OR. RTOPSO(3) .EQ. 1 .OR. RTOPSO(3) .EQ. 6
0134             &.OR. RTOPSO(6) .GE. 4 .OR. RTOPSO(7) .GE. 3) ICHECK = 1
0135             RETURN
0136 C
0137 C Check high use conditions
0138 C
0139         30 IF(RTOPSO(1) .EQ. 1 .OR. RTOPSO(3) .EQ. 1
0140             &.OR. RTOPSO(3) .EQ. 6 .OR. RTOPSO(6) .EQ. 5
0141             &.OR. RTOPSO(7) .EQ. 4) ICHECK = 1
0142         100 RETURN
0143 C
0144         END
0145     END$

```

&TCON2 Y=00004 IS ON CRO0015 USING 00016 BLKS R=0000

```
0001  F7N4
0002  C ===== SUBROUTINE TCON2 =====
0003  C =
0004  C =          TCON : BAD SUBSOIL CHECK
0005  C =
0006  C = SOURCE FILE : &TCON2          OBJECT FILE : %TCON2 =
0007  C =====
0008  C
0009  C
0010  C DESCRIPTION:
0011  C
0012  C      TCON2 TESTS FOR THOSE ENVIRONMENTAL PARAMETERS THAT INDICATE
0013  C      THE PRESENCE OF A BAD SUBSOIL LAYER
0014  C
0015  C CALLING SEQUENCE:
0016  C
0017  C      CALL TCON2 (ICHECK)
0018  C
0019  C ARGUMENTS:
0020  C
0021  C      ICHECK -> SET TO ONE IF BAD SUBSOIL IS PRESENT
0022  C
0023  C ACCESSED BY:
0024  C
0025  C      TCON
0026  C
0027  C SUBROUTINES SCHEDULED:      NONE
0028  C
0029  C LOCAL VARIABLES:          NONE
0030  C
0031  C
0032  C AUTHOR:                    ORVILLE B. GREEN
0033  C
0034  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0035  C
0036  C
0037  C =====
0038  C
0039  C
0040  C      SUBROUTINE TCON2 (ICHECK)
0041  C
0042  C
0043  C      TEKTRONIX COMMON
0044  C
0045  C      COMMON ITEK (45)
0046  C
0047  C      LOGICAL UNITS AND COMMON LOCATION
0048  C
0049  C      COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0050  C
0051  C      POINTERS
0052  C
0053  C      COMMON EXIT      ,IANM(3),ICLI(2),IDEN(3),IGRW(5)
0054  C      COMMON IOPTN     ,IOVR(7),IPNTR ,ISOC(6),ISUB(8)
```



```

0055      COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT ,LUO
0056      COMMON MODE ,NANM ,NCLI ,NGEN ,NGRW
0057      COMMON NOVR ,NSECTS ,NSOC ,NSUB ,NSUR
0058      COMMON NTOP ,NU ,NVEG
0059  C
0060  C      GRADING PARAMETERS
0061  C
0062      COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,DCFA(5)
0063      COMMON GRDVB(5),HWHT(5,10),HWSLI(5,10),NSPP(5),PCER19(4)
0064      COMMON PERCNT(5,10),REHCFY(5),REHVOL(5),SLOPE(5,10),WBF
0065  C
0066  C      CATEGORY TEXT
0067  C
0068      COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0069      COMMON OVBD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0070      COMMON TPSL(49,13),VSTA(15,13)
0071  C
0072  C      EXPECTATION VALUES
0073  C
0074      COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0075      COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0076      COMMON TOPSOI(33,6),VEGETA(10,6)
0077  C
0078  C      CATEGORY RESPONSES
0079  C
0080      COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0081      COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0082      COMMON RTOPSO(9),RVEGET(2)
0083  C
0084  C      FEASI,TECON,DPUSE SUBSYSTEM PARAMETERS
0085  C
0086      COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHM
0087      COMMON CADS(2),CAC,CACP,CABF,CADH
0088      COMMON CADS,CAEAF,CAHSAF,CAHSTS,CAIF
0089      COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0090      COMMON CSTRP,FAVG(5),PFSTSP,PFAC,ROLTEC(29,34)
0091      COMMON TCAR(5),THICK(10),THKYS,TTL(40)
0092  C
0093      INTEGER EXIT,CLMA,GDES,GWHY,OVBD,SBSL
0094      INTEGER SCEC,GWHY,TPSL,VSTA,ANIM
0095      INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0096      INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0097      INTEGER VEGETA,ANIMAL
0098      INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0099      INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0100      INTEGER ROLTEC,TTL
0101  C
0102      INTEGER COMMON (1)
0103      EQUIVALENCE (COMMON (1),ITEK (1))
0104      EQUIVALENCE (IARY (1),LUT)
0105      EQUIVALENCE (IARY2 (1),ISTRK)
0106      EQUIVALENCE (IARY2 (2),ICECT)
0107      EQUIVALENCE (IARY2 (3),ICODE)
0108      EQUIVALENCE (IARY2 (4),LEN)
0109  C
0110      LOGICAL LER

```

```

0111 C
0112 C
0113 C
0114      ICHECK = 0
0115 C
0116      IF(RSUBSO(1) .EQ. 4 .AND. RSUBSO(2) .GE. 2
0117      - .AND. RSUBSO(2) .LE. 5 .AND. RSUBSO(5) .GE. 1
0118      - .AND. RSUBSO(5) .LE. 2 .AND. RSUBSO(6) .GE. 1
0119      - .AND. RSUBSO(6) .LE. 2) ICHECK = 1
0120 C
0121      IF(LUD .NE. 1) GOTO 100
0122 C
0123 C FOR LUD = 1, ELIMINATE CLAY LOAM
0124      IF(RSUBSO(2) .EQ. 5) ICHECK = 0
0125      100 RETURN
0126      END
0127 ENB$

```

&TCON3 T=00004 IS ON CR00015 USING 00024 BLKS R=0000

```
0001  FTN4
0002  C ===== SUBROUTINE  TCON3 =====
0003  C =
0004  C = REHANDLE  TOXIC LAYERS
0005  C =
0006  C = SOURCE FILE : &TCON3 OBJECT FILE : &TCON3
0007  C =====
0008  C
0009  C
0010  C DESCRIPTION:
0011  C
0012  C THIS ROUTINE TESTS FOR TOXIC OVERBURDEN LAYERS THAT REQUIRE
0013  C REHANDLE. REHANDLE IS INITIATED WHEN THE THICKNESS OF A
0014  C TOXIC LAYER IS 15 % (OR GREATER) OF THE TOTAL THICKNESS OF
0015  C THE OVERBURDEN. ALLUVIUM IS ALWAYS REHANDLED, EXCEPT FOR THE
0016  C HIGH USE OPTION (LUO = 5). TCON3 ALSO CHECKS BULK DENSITY
0017  C TO DETERMINE IF RIPPING THREE FOOT CENTERS IS REQUIRED.
0018  C
0019  C CALLING SEQUENCE:
0020  C
0021  C CALL TCON3 (ICHECK,IWHERE,IRIP)
0022  C
0023  C ARGUMENTS:
0024  C
0025  C ICHECK -> SET TO ONE IF AT LEAST ONE LAYER REQUIRES REHANDLING
0026  C IWHERE -> ARRAY CONTAINING THE LITHOLOGIC UNITS NEEDING
0027  C REHANDLING, OR ZERO WHEN REHANDLE IS NOT APPLICABLE.
0028  C IRIP -> SET TO ONE IF RIPPING IS REQUIRED, ZERO IF NOT.
0029  C
0030  C ACCESSED BY:
0031  C
0032  C TECON
0033  C
0034  C SUBROUTINES SCHEDULED : NONE
0035  C
0036  C LOCAL VARIABLES:
0037  C
0038  C TOTTHK -> TOTAL THICKNESS OF THE OVERBURDEN
0039  C MTRK -> MINIMUM THICKNESS FOR REHANDLE (REAL)
0040  C
0041  C
0042  C AUTHOR: ORVILLE D. GREEN
0043  C
0044  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0045  C
0046  C
0047  C =====
0048  C
0049  C
0050  C SUBROUTINE TCON3 (ICHECK,IWHERE,IRIP)
0051  C
0052  C
0053  C TEKTRONIX COMMON
0054  C
```



```

0055      COMMON ITEK (45)
0056      C
0057      C      LOGICAL UNITS AND COMMON LOCATION
0058      C
0059      COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0060      C
0061      C      POINTERS
0062      C
0063      COMMON EXIT      ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0064      COMMON IOPTN     ,IOVR(7),IPNTR  ,ISOC(6),ISUB(8)
0065      COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT  ,LUC
0066      COMMON MODE      ,NANM      ,NCLI      ,NGEN      ,NGRU
0067      COMMON NOVR      ,NSECTS    ,NSOC      ,NSUB      ,NSUR
0068      COMMON NTOP      ,NU        ,NVEG
0069      C
0070      C      GRADING PARAMETERS
0071      C
0072      COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COCO,BCPA(5)
0073      COMMON GROVBS(5),HWHT(5,10),HWSLI(5,10),NSPF(5),PCEQ19(4)
0074      COMMON PERCHT(5,10),REHCPY(5),REHVOL(5),SLOPE(5,10),WBP
0075      C
0076      C      CATEGORY TEXT
0077      C
0078      COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0079      COMMON OVRBD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0080      COMMON TPSEL(49,13),VGTA(15,13)
0081      C
0082      C      EXPECTATION VALUES
0083      C
0084      COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0085      COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0086      COMMON TOPSOI(33,6),VEGETA(10,6)
0087      C
0088      C      CATEGORY RESPONSES
0089      C
0090      COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0091      COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0092      COMMON RTOPSO(9),RVEGET(2)
0093      C
0094      C      FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0095      C
0096      COMMON CAAMM,CABAM,CABFN(3),CABFP(3),CABHM
0097      COMMON CABS(2),CAC,CACP,CADF,CAIH
0098      COMMON CADS,CAEAF,CAHSAF,CAHSTS,CAIF
0099      COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0100      COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0101      COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0102      C
0103      INTEGER EXIT,CLMA,GDES,GWHY,OVRBD,SBSL
0104      INTEGER SCEC,SWHY,TPSEL,VGTA,ANIM
0105      INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0106      INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0107      INTEGER VEGETA,ANIMAL
0108      INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0109      INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0110      INTEGER RCLTEC,TTL

```

```

0111 C
0112 INTEGER COMMON (1)
0113 EQUIVALENCE (COMMON (1), ITEK (1))
0114 EQUIVALENCE (IARRY (1), LUT)
0115 EQUIVALENCE (IARY2 (1), ISTRK)
0116 EQUIVALENCE (IARY2 (2), ISECT)
0117 EQUIVALENCE (IARY2 (3), ICODE)
0118 EQUIVALENCE (IARY2 (4), LEN)
0119 C
0120 LOGICAL LER
0121 C
0122 INTEGER IWHERE (10)
0123 C
0124 REAL MTRR
0125 C
0126 C INITIALIZE IWHERE ARRAY
0127 C
0128 DO 5 I = 1, NU
0129 5 IWHERE (I) = 0
0130 IRIF = 0
0131 C
0132 C DETERMINE THE TOTAL THICKNESS AND THE MINIMUM THICKNESS FOR REHANDLE
0133 C
0134 TOTTHK = 0.
0135 DO 10 I = 1, NU
0136 10 TOTTHK = TOTTHK + THICK (I)
0137 MTRR = TOTTHK * .15
0138 C
0139 C CHECK THE NUMBER OF ROCKS
0140 C
0141 DO 25 I = 1, NU
0142 IF (ROVRBD (1, I) .NE. 4 .OR. THICK (I) .LT. MTRR) GOTO 25
0143 IWHERE (I) = I
0144 25 CONTINUE
0145 C
0146 C CHECK THE SALINITY
0147 C
0148 DO 35 I = 1, NU
0149 IF (ROVRBD (4, I) .NE. 5 .OR. THICK (I) .LT. MTRR) GOTO 35
0150 IWHERE (I) = I
0151 35 CONTINUE
0152 C
0153 C CHECK THE SODIUM ADSORPTION RATIO
0154 C
0155 DO 45 I = 1, NU
0156 IF (ROVRBD (5, I) .NE. 4 .OR. THICK (I) .LT. MTRR) GOTO 45
0157 IWHERE (I) = I
0158 45 CONTINUE
0159 C
0160 C CHECK FOR ALLUVIUM
0161 C
0162 50 IF (LUO.EQ.5) GOTO 600
0163 IF (ROVRWHY(5) .EQ.1) IWHERE (I) = 1
0164 C
0165 C RECHECK SALINITY FOR CROPLAND AND NATIVE VEGETATION
0166 C

```

```

0167      IF(LUD.GT.2) GOTO 500
0168      DO 55 I=1,NU
0169      IF(ROVRBD(4,I).NE.4.OR.THICK(I).LT.MTFR) GOTO 55
0170      IWHERE (I) = I
0171      55 CONTINUE
0172      C
0173      C      RECHECK NUMBER OF ROCKS FOR CROPLAND
0174      C
0175      56 IF(LUD.NE.1) GOTO 500
0176      DO 60 I=1,NU
0177      IF(ROVRBD(1,I).NE.3.OR.THICK(I).LT.MTFR) GOTO 60
0178      IWHERE (I) = I
0179      60 CONTINUE
0180      C
0181      C      CHECK BULK DENSITY
0182      C
0183      500 DO 510 I = 1, NU
0184      IF (ROVRBD(3,I).NE.2.OR.THICK(I).LT.MTFR) GOTO 510
0185      IRIP = 1
0186      510 CONTINUE
0187      600 ICHECK = 0
0188      DO 610 I = 1, NU
0189      IF (IWHERE (I) .EQ. 0) GOTO 610
0190      ICHECK = 1
0191      610 CONTINUE
0192      RETURN
0193      END
0194      END*

```



&TCONE T=00004 IS ON CR00015 USING 00022 BLKS R=0144

```
0001  FTN4
0002                      SUBROUTINE TCONE
0003  C                      ---TECON COST EDIT---
0004  C
0005  C LEVEL 1
0006  C
0007  C
0008  C TCONE IS SCHEDULED BY CLAIM TO MAKE PERMANENT CHANGES TO THE
0009  C FILE : CCFTS, THE TECON COST FILE. CCFTS ENTRIES ARE STORED
0010  C IN THE LOCAL ARRAY TCOST, WHICH IS PROCESSED FOR USER EDITS.
0011  C TCOST WILL OVERWRITE THE PREVIOUS CCFTS FILE, IF THE USER
0012  C SO INDICATES AFTER EDITING. OTHERWISE, THE EDITED TECON
0013  C VALUES ARE VALID ONLY UNTIL THIS ROUTINE IS CALLED AGAIN
0014  C (IN WHICH CASE, THE FILE CCFTS IS READ AGAIN, OVERWRITING
0015  C THE PREVIOUS EDITS) , OR UNTIL (SURPRISINGLY), CLAIM
0016  C TERMINATES.
0017  C
0018  C THE USER MUST CORRECTLY ENTER THE SECURITY CODE "RECMOD" TO
0019  C MAKE THE EDITS PERMANENT
0020  C
0021  C TCONE USES THE SYSTEM ROUTINE "SPOLU" TO ACCESS THE
0022  C FILE "CCFTS"
0023  C
0024  C THE TCS ROUTINES : ERASE AND HOME, ARE CALLED.
0025  C
0026  C THIS ROUTINE WAS WRITTEN BY GREEN
0027  C
0028  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0029  C
0030  C =====
0031  C
0032  C      TEKTRONIX COMMON
0033  C
0034  C      COMMON ITEK (45)
0035  C
0036  C      LOGICAL UNITS AND COMMON LOCATION
0037  C
0038  C      COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0039  C
0040  C      POINTERS
0041  C
0042  C      COMMON EXIT      ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0043  C      COMMON IOPTN    ,IOVR(7),IPNTR  ,ISOC(6),ISUB(8)
0044  C      COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT  ,LUO
0045  C      COMMON MODE     ,NANM      ,NCLI      ,NGEN      ,NGRW
0046  C      COMMON NOVR     ,NSECTS    ,NSOC      ,NSUB      ,NSUR
0047  C      COMMON NTOP     ,NU        ,NVEG
0048  C
0049  C      GRADING PARAMETERS
0050  C
0051  C      COMMON AREA(5),BENLEN(5,10),BENWI(5,10),CORG,BCPA(5)
0052  C      COMMON GRDUBS(5),HWHT(5,10),HWSLI(5,10),NSPF(5),PCER19(4)
0053  C      COMMON PERCNT(5,10),REHCPY(5),REHVOL(5),SLOPE(5,10),WBF
0054  C
```

```

0055 C CATEGORY TEXT
0056 C
0057 COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0058 COMMON OVBD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0059 COMMON TPSL(49,13),VGTA(15,13)
0060 C
0061 C EXPECTATION VALUES
0062 C
0063 COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0064 COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0065 COMMON TOPSOI(33,6),VEGETA(10,6)
0066 C
0067 C CATEGORY RESPONSES
0068 C
0069 COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0070 COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0071 COMMON RTOPSO(9),RVEGET(2)
0072 C
0073 C FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0074 C
0075 COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHM
0076 COMMON CABS(2),CAC,CACP,CAIF,CADH
0077 COMMON CADS,CAEAF,CAHSAF,CAHSTS,CAIF
0078 COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0079 COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0080 COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0081 C
0082 INTEGER EXIT,CLMA,GDES,GWHY,OVBD,SBSL
0083 INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0084 INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0085 INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0086 INTEGER VEGETA,ANIMAL
0087 INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0088 INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0089 INTEGER RCLTEC,TTL
0090 C
0091 INTEGER COMMON (1)
0092 EQUIVALENCE (COMMON (1), ITEK (1))
0093 EQUIVALENCE (IARY (1), LUT)
0094 EQUIVALENCE (IARY2 (1), ISTRK)
0095 EQUIVALENCE (IARY2 (2), ISECT)
0096 EQUIVALENCE (IARY2 (3), ICODE)
0097 EQUIVALENCE (IARY2 (4), LEN)
0098 C
0099 LOGICAL LER
0100 C
0101 C =====
0102 C
0103 DIMENSION TCOST(25)
0104 EQUIVALENCE (TCOST(1),CAAHM)
0105 INTEGER KTCOST(25,30),CCFTS(3)
0106 INTEGER RECMOD(3)
0107 DATA CCFTS/2HCC,2HFT,2HS /
0108 DATA ICR/15/
0109 C
0110 C OPEN CCFTS / READ TCOST / CLOSE CCFTS

```



```

0111 C
0112 CALL SPOLU(LUF,CCFTS,2,1,ICR)
0113 IF(LUF.LT.0) STOP 1
0114 DO 10 K=1,25
0115 10 READ(LUF,15) TCost(K),(KTCOST(K,I),I=1,30)
0116 15 FORMAT(1X,F6.3,2X,40A2)
0117 CALL SPOLU(LUF,CCFTS,2,2,ICR)
0118 IF(LUF.LT.0) STOP 2
0119 C
0120 C READ EDIT ITEM
0121 C
0122 20 IF(LER) CALL ERASE
0123 IF(LER) CALL HOME
0124 DO 25 K=1,25
0125 25 WRITE(LUT,30) K,(KTCOST(K,I),I=1,30),TCOST(K)
0126 30 FORMAT(1X,I2)"1X,30A2,1X":",F6.3)
0127 WRITE(LUT,35)
0128 35 FORMAT(/,1X"ENTER NUMBER CORRESPONDING TO EDIT ITEM"/,
0129 > 1X"(ZERO TO QUIT) -> _")
0130 40 READ(LUT,*) ITEM
0131 IF(ITEM.EQ.0) GOTO 100
0132 IF(ITEM.GE.1.AND.ITEM.LE.25) GOTO 50
0133 WRITE(LUT,45)
0134 45 FORMAT(/,1X"ERROR. ILLEGAL ENTRY. RE-INPUT -> _")
0135 GOTO 40
0136 C
0137 C READ NEW VALUE FOR TCost "ITEM"
0138 C
0139 50 WRITE(LUT,55)
0140 55 FORMAT(/1X"ENTER NEW VALUE -> _")
0141 60 READ(LUT,*) TCost(ITEM)
0142 IF(TCost(ITEM).GE.0.) GOTO 20
0143 WRITE(LUT,45)
0144 GOTO 60
0145 C
0146 C SEE IF USER WANTS TO MAKE CHANGE PERMANENT. IF SO
0147 C HE MUST CORRECTLY INPUT THE SECURITY CODE "RECMOD"
0148 C
0149 100 WRITE(LUT,1015)
0150 1015 FORMAT(5X"TO MAKE CHANGES PERMANENT, ENTER THE"/
0151 > 5X"SECURITY CODE, OTHERWISE ENTER NO -> _")
0152 READ(LUT,1016) RECMOD
0153 1016 FORMAT(3A2)
0154 IF(RECMOD(1).NE.2HRE) RETURN
0155 IF(RECMOD(2).NE.2HCM) RETURN
0156 IF(RECMOD(3).NE.2HOD) RETURN
0157 C
0158 C WRITE OVER PREVIOUS FILE AND QUIT.
0159 C
0160 CALL SPOLU(LUF,CCFTS,3,1,ICR)
0161 IF(LUF.LT.0) STOP 3
0162 DO 115 K = 1,25
0163 115 WRITE(LUF,15) TCost(K),(KTCOST(K,I),I=1,30)
0164 CALL SPOLU(LUF,CCFTS,3,2,ICR)
0165 IF(LUF.LT.0) STOP 4
0166 RETURN

```



0167

END

0168

END†

&TCON4 Y=00004 IS ON CRO0015 USING 00016 BLKS R=0000

```
0001  FTN4
0002  C ===== SUBROUTINE  TCON4 =====
0003  C =
0004  C =          TECON : GOOD SUBSOIL PRESENT
0005  C =
0006  C = SOURCE FILE : &TCON4          OBJECT FILE : %TCON4
0007  C =====
0008  C
0009  C
0010  C DESCRIPTION:
0011  C
0012  C      TCON4 TESTS FOR THOSE ENVIRONMENTAL PARAMETERS THAT, IN THE
0013  C      PRESENCE OF A GOOD TOPSOIL LAYER, INDICATE THAT AN ADEQUATE
0014  C      SUBSOIL LAYER IS PRESENT.
0015  C
0016  C CALLING SEQUENCE:
0017  C
0018  C      CALL TCON4 (ICHECK)
0019  C
0020  C ARGUMENTS:
0021  C
0022  C      ICHECK -> SET TO ONE IF GOOD SUBSOIL IS PRESENT
0023  C
0024  C ACCESSED BY:
0025  C
0026  C      TECON
0027  C
0028  C SUBROUTINES SCHEDULED:      NONE
0029  C
0030  C LOCAL VARIABLES:          NONE
0031  C
0032  C
0033  C AUTHOR:                    ORVILLE D. GREEN
0034  C
0035  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0036  C
0037  C
0038  C =====
0039  C
0040  C
0041  C      SUBROUTINE TCON4 (ICHECK)
0042  C
0043  C
0044  C      TEKTRONIX COMMON
0045  C
0046  C      COMMON ITEX (45)
0047  C
0048  C      LOGICAL UNITS AND COMMON LOCATION
0049  C
0050  C      COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0051  C
0052  C      POINTERS
0053  C
0054  C      COMMON EXIT      ,IANK(3),ICLI(2),IGEN(3),IGRW(5)
```

```

0055      COMMON IOPTN  ,IOVR(7),IPNTR  ,ISOC(6),ISUB(8)
0056      COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT  ,LUO
0057      COMMON MODE   ,NANM   ,NCLI   ,NGEN   ,NGRW
0058      COMMON NOVR    ,NSECTS ,NSOC    ,NSUB    ,NSUR
0059      COMMON NTOP     ,NU      ,NVEG
0060      C
0061      C      GRADING PARAMETERS
0062      C
0063      COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,BCPA(5)
0064      COMMON GROVBS(5),HWHT(5,10),HWSLI(5,10),NSFP(5),PCEQ19(4)
0065      COMMON PERCNT(5,10),REHCPY(5),REHVOL(5),SLOPE(5,10),WBF
0066      C
0067      C      CATEGORY TEXT
0068      C
0069      COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0070      COMMON OVRD(11,13),SBSL(13), SCEC(33,13),SWHY(44,13)
0071      COMMON TPSL(49,13),VGTA(15,13)
0072      C
0073      C      EXPECTATION VALUES
0074      C
0075      COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0076      COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0077      COMMON TOPSOI(33,6),VEGETA(10,6)
0078      C
0079      C      CATEGORY RESPONSES
0080      C
0081      COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0082      COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0083      COMMON RTOPSO(9),RVEGET(2)
0084      C
0085      C      FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0086      C
0087      COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHM
0088      COMMON CABS(2),CAC,CACF,CADF,CADH
0089      COMMON CADS,CAEAF,CAHSAF,CAHSTS,CAIF
0090      COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0091      COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0092      COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0093      C
0094      INTEGER EXIT,CLMA,GDES,GWHY,OVRD,SBSL
0095      INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0096      INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0097      INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0098      INTEGER VEGETA,ANIMAL
0099      INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0100      INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0101      INTEGER RCLTEC,TTL
0102      C
0103      INTEGER COMMON (1)
0104      EQUIVALENCE (COMMON (1), ITEK (1))
0105      EQUIVALENCE (IARY2 (1), LUT)
0106      EQUIVALENCE (IARY2 (1), ISTRK)
0107      EQUIVALENCE (IARY2 (2), ISECT)
0108      EQUIVALENCE (IARY2 (3), ICODE)
0109      EQUIVALENCE (IARY2 (4), LEN)
0110      C

```



```

0111          LOGICAL LER
0112 C
0113 C
0114          IF(LUO.EQ.1) GOTO 100
0115 C
0116          IF(RSUBSO(1).EQ.1.OR.RSUBSO(2).EQ.1.
0117 - OR.RSUBSO(2).EQ.6.OR.RSUBSO(5).EQ.5.
0118 - OR.RSUBSO(6).EQ.4) ICHECK = 1
0119          RETURN
0120 C
0121 100 IF(RSUBSO(1).EQ.1.OR.RSUBSO(2).EQ.1
0122 - .OR.RSUBSO(2).GE.5.OR.RSUBSO(5).GE.3
0123 - .OR.RSUBSO(6).GE.3) ICHECK = 1
0124          RETURN
0125          END
0126  END$

```

&TCONS T=00004 IS ON CR00015 USING 00019 BLKS R=0000

```
0001  FTN4
0002  C ===== SUBROUTINE  TCONS =====
0003  C =
0004  C =          TECON : IRRIGATE PLANTINGS CHECK
0005  C =
0006  C = SOURCE FILE : &TCONS          OBJECT FILE : %TCONS
0007  C =====
0008  C
0009  C
0010  C DESCRIPTION:
0011  C
0012  C      TCONS TESTS FOR THOSE ENVIRONMENTAL PARAMETERS THAT INDICATE
0013  C      THE TECHNIQUE : IRRIGATE PLANTINGS, SHOULD BE IMPLEMENTED
0014  C
0015  C CALLING SEQUENCE:
0016  C
0017  C      CALL TCONS (ICHECK)
0018  C
0019  C ARGUMENTS:
0020  C
0021  C      ICHECK -> SET TO ONE IF THE TECHNIQUES SHOULD BE IMPLEMENTED
0022  C
0023  C ACCESSED BY:
0024  C
0025  C      TECON
0026  C
0027  C SUBROUTINES SCHEDULED:      NONE
0028  C
0029  C LOCAL VARIABLES:          NONE
0030  C
0031  C
0032  C AUTHOR:                    ORVILLE D. GREEN
0033  C
0034  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0035  C
0036  C
0037  C =====
0038  C
0039  C
0040  C      SUBROUTINE TCONS (ICHECK)
0041  C
0042  C
0043  C      TEKTRONIX COMMON
0044  C
0045  C      COMMON ITER (45)
0046  C
0047  C      LOGICAL UNITS AND COMMON LOCATION
0048  C
0049  C      COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0050  C
0051  C      POINTERS
0052  C
0053  C      COMMON EXIT      ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0054  C      COMMON IOPTN     ,IOVR(7),IPNTR  ,ISOC(6),ISUB(8)
```

```

0055      COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT  ,LUD
0056      COMMON MODE  ,NANM  ,NCLI  ,NGEN  ,NGRW
0057      COMMON NOVR  ,NSECTS ,NSOC  ,NSUB  ,NSUR
0058      COMMON NTOP  ,NU    ,NVEG
0059  C
0060  C      GRADING PARAMETERS
0061  C
0062      COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCPA(5)
0063      COMMON GROVES(5),HWHT(5,10),HWSLI(5,10),NSFP(5),PCEQ19(4)
0064      COMMON PERCNT(5,10),REHCFY(5),REHVOL(5),SLOPE(5,10),WBF
0065  C
0066  C      CATEGORY TEXT
0067  C
0068      COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0069      COMMON OVRD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0070      COMMON TPSL(49,13),VGTA(15,13)
0071  C
0072  C      EXPECTATION VALUES
0073  C
0074      COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0075      COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0076      COMMON TOPSOI(33,6),VEGETA(10,6)
0077  C
0078  C      CATEGORY RESPONSES
0079  C
0080      COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0081      COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0082      COMMON RTOPSO(9),RVEGET(2)
0083  C
0084  C      FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0085  C
0086      COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHM
0087      COMMON CABS(2),CAC,CACP,CADF,CADH
0088      COMMON CADS,CAEAF,CAHSAF,CAHSTS,CAIF
0089      COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0090      COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0091      COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0092  C
0093      INTEGER EXIT,CLMA,GDES,GWHY,OVRD,SBSL
0094      INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0095      INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0096      INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0097      INTEGER VEGETA,ANIMAL
0098      INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0099      INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0100      INTEGER RCLTEC,TTL
0101  C
0102      INTEGER COMMON (1)
0103      EQUIVALENCE (COMMON (1), ITEK (1))
0104      EQUIVALENCE (IARRY (1), LUT)
0105      EQUIVALENCE (IARY2 (1), ISTRK)
0106      EQUIVALENCE (IARY2 (2), ISECT)
0107      EQUIVALENCE (IARY2 (3), ICODE)
0108      EQUIVALENCE (IARY2 (4), LEN)
0109  C
0110      LOGICAL LER

```



```

0111 C
0112 C
0113 C
0114 C
0115 C Check average precipitation
0116 C
0117 IF(RCLIMA(1).EQ.1) GOTO 50
0118 C
0119 IF(LUO.EQ.2.OR.LUO.EQ.3.OR.LUO.EQ.5) RETURN
0120 IF(RCLIMA(1).NE.2) RETURN
0121 C
0122 C ***** Check surface and ground water for LUO *****
0123 C
0124 50 GOTO(60,70,70,80,90) LUO
0125 C
0126 60 IF(RSURHY(2) .GE. 3 .AND. RSURHY(5) .LE. 2
0127 * .AND. RSURHY(6) .LE. 2) ICHECK = 1
0128 IF(RGRWHY(2) .GE. 3 .AND. RGRWHY(3) .LE. 2
0129 * .AND. RGRWHY(4) .LE. 2) ICHECK = 1
0130 RETURN
0131 C
0132 70 IF(RSURHY(2) .GE. 2 .AND. RSURHY(5) .LE. 3
0133 * .AND. RSURHY(6) .LE. 3) ICHECK = 1
0134 IF(RGRWHY(2) .GE. 2 .AND. RGRWHY(3) .LE. 3
0135 * .AND. RGRWHY(4) .LE. 3) ICHECK = 1
0136 RETURN
0137 C
0138 C
0139 80 IF(RSURHY(2) .GE. 4 .AND. RSURHY(5) .LE. 3
0140 * .AND. RSURHY(6) .LE. 2) ICHECK = 1
0141 IF(RGRWHY(2) .GE. 4 .AND. RGRWHY(3) .LE. 3
0142 * .AND. RGRWHY(4) .LE. 2) ICHECK = 1
0143 RETURN
0144 C
0145 90 IF(RSURHY(2) .GE. 2 .AND. RSURHY(5) .LE. 3.
0146 * AND. RSURHY(6) .LE. 3) ICHECK = 1
0147 IF(RGRWHY(2) .GE. 2 .AND. RGRWHY(3) .LE. 3 .AND.
0148 * RGRWHY(4) .LE. 3 .AND. RGRWHY(5).EQ.2) ICHECK = 1
0149 RETURN
0150 END
0151 ENDD$

```

&TECON T=00004 IS ON CR00015 USING 00083 BLKS R=0643

```
0001  FTN4
0002  C ===== SUBROUTINE  TECON =====
0003  C =
0004  C =          TECHNIQUES  AND  ECONOMICS  SUBSYSTEM
0005  C =
0006  C = SOURCE FILE : &TECON                      OBJECT FILE : %TECON
0007  C =====
0008  C
0009  C
0010  C DESCRIPTION:
0011  C
0012  C  TECON IS ACCESSED BY CLAIM TO DETERMINE THE TECHNIQUES AND
0013  C  ECONOMICS LISTING FOR THE FIVE LAND USE OPTIONS. THE
0014  C  LIST IS PRESENTED IN THE ORDER THAT THE RECLAMATION
0015  C  ENGINEER WOULD NORMALLY APPLY EACH TECHNIQUE. THE
0016  C  FIVE LAND USES ARE PRESENT FROM LEAST TO MOST EXPENSIVE
0017  C
0018  C SUBROUTINES SCHEDULED:
0019  C  TCON0
0020  C  TCON1
0021  C  TCON2
0022  C  TCON3
0023  C  TCON4
0024  C  TCON5
0025  C
0026  C
0027  C THIS ROUTINE WAS WRITTEN BY GREEN
0028  C
0029  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0030  C
0031  C
0032  C =====
0033  C
0034  C          SUBROUTINE TECON
0035  C
0036  C          TEKTRONIX COMMON
0037  C
0038  C          COMMON ITEK (45)
0039  C
0040  C          LOGICAL UNITS AND COMMON LOCATION
0041  C
0042  C          COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0043  C
0044  C          POINTERS
0045  C
0046  C          COMMON EXIT      ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0047  C          COMMON IOFTN     ,IOVR(7),IFNTR  ,ISOC(6),ISUB(8)
0048  C          COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT  ,LUO
0049  C          COMMON MODE      ,NANM      ,NCLI      ,NGEN      ,NGRW
0050  C          COMMON NOVR      ,NSECTS    ,NSOC      ,NSUB      ,NSUR
0051  C          COMMON NTOP      ,NU        ,NVEG
0052  C
0053  C          GRADING PARAMETERS
0054  C
```



```

0055      COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCPA(5)
0056      COMMON GROVBS(5),HWHT(5,10),HWSLI(5,10),NSPP(5),PCEQ19(4)
0057      COMMON PERCNT(5,10),REHCPY(5),REHVOL(5),SLOPE(5,10),WBP
0058      C
0059      C      CATEGORY TEXT
0060      C
0061      COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0062      COMMON OVBD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0063      COMMON TPSL(49,13),VGTA(15,13)
0064      C
0065      C      EXPECTATION VALUES
0066      C
0067      COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0068      COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0069      COMMON TOPSOI(33,6),VEGETA(10,6)
0070      C
0071      C      CATEGORY RESPONSES
0072      C
0073      COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0074      COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0075      COMMON RTOPSO(9),RVEGET(2)
0076      C
0077      C      FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0078      C
0079      COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHM
0080      COMMON CABS(2),CAC,CACP,CADF,CADH
0081      COMMON CADS,CAEAF,CAHSAF,CAHSTS,CAIF
0082      COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0083      COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0084      COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0085      C
0086      INTEGER EXIT,CLMA,GDES,GWHY,OVBD,SBSL
0087      INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0088      INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0089      INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0090      INTEGER VEGETA,ANIMAL
0091      INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0092      INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0093      INTEGER RCLTEC,TTL
0094      C
0095      INTEGER COMMON (1)
0096      EQUIVALENCE (COMMON (1), ITEX (1))
0097      EQUIVALENCE (IARY (1), LUT)
0098      EQUIVALENCE (IARY2 (1), ISTRK)
0099      EQUIVALENCE (IARY2 (2), ISECT)
0100      EQUIVALENCE (IARY2 (3), ICODE)
0101      EQUIVALENCE (IARY2 (4), LEN)
0102      C
0103      LOGICAL LER
0104      C
0105      DIMENSION EKON(5),IFLCK(6)
0106      DIMENSION IORDER(29),EXPENS(29)
0107      DIMENSION CARHL (10), IWHERE (10)
0108      C
0109      C =====
0110      C

```



```

0111 C      SET CONVERSION FACTORS
0112 C
0113      CF1 = 43560. / (27. * 100.)
0114      CF2 = CF1 * 2.
0115      CF3 = 43560. / (12. * 27. * 100.)
0116 C      CHECK FOR FLAGS AND 0*'S
0117 C
0118      4 DO 5 1 = 1, 6
0119      5 IFLCK (1) = 0
0120      CALL TCONO (IFLCK)
0121 C
0122 C      INITIALIZE INCREMENTS AND SET UP THE LOOP
0123 C
0124      LUD = 0
0125      10 II = 0
0126      IC2 = 0
0127      DO 8 1 = 1, NU
0128      8 CARHL (I) = 0.
0129      ICHECK = 0
0130      DO 15 1 = 1, 29
0131      15 EXPENS (I) = 0.
0132      IF (IPNTR .EQ. 2) GOTO 50
0133      LUD = LUD + 1
0134      IPTRO = 0
0135      IF (LUD .GT. 5) GOTO 600
0136 C
0137 C      CHECK IFLCK ARRAY AND GCFA ARRAY FOR 0*'S
0138 C
0139      GOTO (20, 25, 30, 35, 40) LUD
0140 C
0141 C      CROPLAND * CHECK CONDITIONS 1,2,3,4, AND 7
0142 C
0143      20 IF (GCFA (1) .EQ. 0.) 500, 22
0144      22 DO 23 I = 1, 4
0145      IF (IFLCK (I) .EQ. 1) 500, 23
0146      23 CONTINUE
0147      GOTO 50
0148 C
0149 C      NATIVE VEGETATION * CHECK CONDITIONS 4,5, AND 7
0150 C
0151      25 IF (IFLCK (4) .EQ. 1 .OR. IFLCK (5) .EQ. 1) 500, 26
0152      26 IF (GCFA (2) .EQ. 0.) 500, 50
0153 C
0154 C      WILDLIFE * CHECK CONDITIONS 3,5, AND 7
0155 C
0156      30 IF (IFLCK (3) .EQ. 1 .OR. IFLCK (5) .EQ. 1) 500, 31
0157      31 IF (GCFA (3) .EQ. 0.) 500, 50
0158 C
0159 C      WATER RECREATION * CHECK CONDITIONS 3,4,5, AND 7
0160 C
0161      35 IF (GCFA (4) .EQ. 0.) 500, 36
0162      36 IF (IFLCK (3) .EQ. 1 .OR. IFLCK (4) .EQ. 1 .OR. IFLCK (5) .EQ. 1)
0163      . 500, 50
0164 C
0165 C      HIGH USE * CHECK CONDITIONS 1,3,4,5, AND 7
0166 C

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0167      40 IF (GCPA (5) .EQ. 0.) 500, 45
0168      45 DO 47 I = 1, 5
0169          IF (I .EQ. 2) GOTO 47
0170          IF (IFLCK (I) .EQ. 1) 500, 47
0171      47 CONTINUE
0172  C
0173  C =====
0174  C          TOPSOIL, SUBSOIL MANAGEMENT AND OVERBURDEN PREPARATION
0175  C =====
0176  C
0177      50 CALL TCON1 (ICHECK)
0178          IF (ICHECK .EQ. 0) GOTO 100
0179          CALL TCON2 (ICHECK)
0180          IF (ICHECK .EQ. 0) GOTO 70
0181  C
0182  C          STRIP / RESPREAD TWO FEET OF SUBSOIL (C3,C4)
0183  C
0184      60 II = II + 1
0185          IORDER (II) = 5
0186          EXPENS (II) = CSTRM * CF2
0187          IF (LUO .EQ. 1 .OR. LUO .EQ. 5) GOTO 65
0188          EXPENS (II) = EXPENS (II) - (EXPENS (II) * PCEQ19 (LUO-1))
0189      65 II = II + 1
0190          IORDER (II) = 6
0191          EXPENS (II) = CSTRP * CF2
0192          IF (LUO .EQ. 1 .OR. LUO .EQ. 5) GOTO 80
0193          EXPENS (II) = EXPENS (II) - (EXPENS (II) * PCEQ19 (LUO-1))
0194          GOTO 80
0195  C
0196      70 IC2 = 1
0197      80 CALL TCON3 (ICHECK,IWHERE,IRIP)
0198          IF (ICHECK .EQ. 0 .AND. IC2 .EQ. 1) GOTO 90
0199          IF (ICHECK .EQ. 0) GOTO 120
0200  C
0201  C          REHANDLE WHOLE LAYER (C1)
0202  C
0203          II = II + 1
0204          IORDER (II) = 7
0205          DO 85 I = 1, NU
0206              IF (IWHERE (I) .EQ. 0) GOTO 85
0207              CARHL (I) = CSTES * THICK (IWHERE (I)) * CF1
0208      85 EXPENS (II) = EXPENS (II) + CARHL (I)
0209          IF (IC2 .NE. 1) GOTO 120
0210  C
0211  C          REHANDLE 2 FEET OF SEEDBED SUITABLE SPOIL (C2)
0212  C
0213      90 II = II + 1
0214          IORDER (II) = 8
0215          EXPENS (II) = CSTES * CF1
0216          GOTO 120
0217  C
0218  C          STRIP / RESPREAD ALL TOPSOIL (A1,A2)
0219  C
0220      100 II = II + 1
0221          IORDER (II) = 1
0222          EXPENS (II) = CSTRM * THKTS * CF3

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0223      IF (LUO .EQ. 1 .OR. LUO .EQ. 5) GOTO 105
0224      EXPENS (II) = EXPENS (II) - (EXPENS (II) * PCEQ19 (LUO-1))
0225 105  II = II + 1
0226      IORDER (II) = 2
0227      EXPENS (II) = CSTRP * THKTS * CF3
0228      IF (LUO .EQ. 1 .OR. LUO .EQ. 5) GOTO 110
0229      EXPENS (II) = EXPENS (II) - (EXPENS (II) * PCEQ19 (LUO-1))
0230  C
0231  C      CHECK TOPSOIL THICKNESS
0232  C
0233 110  IF (RTOPSO (1) .EQ. 4) GOTO 80
0234  C
0235      CALL TCON4 (ICHECK)
0236      IF (ICHECK .EQ. 0) GOTO 111
0237      II = II - 2
0238      GOTO 60
0239  C
0240  C      STRIP / RESPREAD ONE FOOT OF SUBSOIL (B1,B2)
0241  C
0242 111  II = II + 1
0243      IORDER (II) = 3
0244      EXPENS (II) = CSTRM * CF1
0245      IF (LUO .EQ. 1 .OR. LUO .EQ. 5) GOTO 115
0246      EXPENS (II) = EXPENS (II) - (EXPENS (II) * PCEQ19 (LUO-1))
0247 115  II = II + 1
0248      IORDER (II) = 4
0249      EXPENS (II) = CSTRP * CF1
0250      IF (LUO .EQ. 1 .OR. LUO .EQ. 5) GOTO 80
0251      EXPENS (II) = EXPENS (II) - (EXPENS (II) * PCEQ19 (LUO-1))
0252      GOTO 80
0253  C
0254  C      GRADE SPOIL (C3)
0255  C
0256 120  II = II + 1
0257      IORDER (II) = 9
0258      EXPENS (II) = GCPA (LUO)
0259      IF (LUO .EQ. 5 .OR. IRIP .EQ. 0) GOTO 130
0260  C
0261  C      RIP 3 FOOT CENTERS (C4)
0262  C
0263      II = II + 1
0264      IORDER (II) = 10
0265      EXPENS (II) = CAR3FC
0266      IF (LUO .EQ. 1) GOTO 130
0267      EXPENS (II) = EXPENS (II) - (EXPENS (II) * PCEQ19 (LUO-1))
0268  C
0269  C =====
0270  C      SEEDBED PREPARATION
0271  C =====
0272  C
0273  C      CHISEL FLOW
0274  C
0275 130  II = II + 1
0276      IORDER (II) = 11
0277      EXPENS (II) = CACF
0278      IF (LUO .EQ. 1 .OR. LUO .EQ. 5) GOTO 140

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0279      EXPENS (II) = EXPENS (II) - (EXPENS (II) * PCEQ19 (LUO-1))
0280 140 ACACP = EXPENS (II)
0281 C
0282 C      DISC AND HARROW (D2)
0283 C
0284      II = II + 1
0285      IORDER (II) = 12
0286      EXPENS (II) = CADH
0287      IF (LUO .EQ. 1 .OR. LUO .EQ. 5) GOTO 150
0288      EXPENS (II) = EXPENS (II) - (EXPENS (II) * PCEQ19 (LUO-1))
0289 150 ACADH = EXPENS (II)
0290 C
0291 C      CHAINING (D3)
0292 C
0293      II = II + 1
0294      IORDER (II) = 13
0295      EXPENS (II) = CAC * PCEQ19 (LUO - 1)
0296      IF (EXPENS(II) .GT. 0.) GOTO 151
0297      II = II - 1
0298 C
0299 C =====
0300 C                      SEEDING
0301 C =====
0302 C
0303 C
0304 C      BUY SEED (E1)
0305 C
0306 151 II = II + 1
0307      IORDER (II) = 14
0308      IF (LUO .EQ. 1) GOTO 155
0309      EXPENS (II) = CABS (2) - CABS (2) * PCEQ19 (LUO - 1)
0310      >          + CABS (2) * 2. * PCEQ19 (LUO - 1)
0311      GOTO 160
0312 155 EXPENS (II) = CABS (1)
0313 160 ACABS = EXPENS (II)
0314 C
0315 C      DRILL SEED (E2)
0316 C
0317      II = II + 1
0318      IORDER (II) = 15
0319      EXPENS (II) = CADS
0320      IF (LUO .EQ. 1 .OR. LUO .EQ. 5) GOTO 170
0321      EXPENS (II) = EXPENS (II) - (EXPENS (II) * PCEQ19 (LUO-1))
0322 170 ACADS = EXPENS (II)
0323 C
0324 C      BUY FERTILIZER : NITROGEN (E3A)
0325 C
0326      II = II + 1
0327      IORDER (II) = 16
0328      EXPENS (II) = CABFN (RTOPSO (8))
0329 C
0330 C      BUY FERTILIZER : PHOSPHATE (E3B)
0331 C
0332      II = II + 1
0333      IORDER (II) = 17
0334      EXPENS (II) = CABFP (RTOPSO (9))

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0335 C
0336 C DRILL FERTILIZER (E4)
0337 C
0338 II = II + 1
0339 IORDER (II) = 18
0340 EXPENS (II) = CADF
0341 IF (LUO .EQ. 1 .OR. LUO .EQ. 5) GOTO 180
0342 EXPENS (II) = EXPENS (II) - (EXPENS (II) * PCEQ19 (LUO-1))
0343 180 ACADF = EXPENS (II)
0344 C
0345 C BUY HAY MULCH (E5)
0346 C
0347 II = II + 1
0348 IORDER (II) = 19
0349 EXPENS (II) = CABHM
0350 IF (LUO .EQ. 1 .OR. LUO .EQ. 5) GOTO 190
0351 EXPENS (II) = EXPENS (II) - (EXPENS (II) * PCEQ19 (LUO-1))
0352 190 ACABHM = EXPENS (II)
0353 C
0354 C APPLY HAY MULCH (E6)
0355 C
0356 II = II + 1
0357 IORDER (II) = 20
0358 EXPENS (II) = CAAHM
0359 IF (LUO .EQ. 1 .OR. LUO .EQ. 5) GOTO 200
0360 EXPENS (II) = EXPENS (II) - (EXPENS (II) * PCEQ19 (LUO-1))
0361 200 ACAAHM = EXPENS (II)
0362 C
0363 C HYDROMULCH SEED AND FERTILIZER (E7)
0364 C
0365 IF (LUO .EQ. 1 .OR. LUO .EQ. 5) GOTO 210
0366 II = II + 1
0367 IORDER (II) = 21
0368 EXPENS (II) = CAHSF * PCEQ19 (LUO - 1)
0369 C
0370 C HAND PLANT SHRUB AND TREE SEEDLINGS
0371 C
0372 210 IF (LUO .NE. 1) GOTO 220
0373 IF (RANIMA (1) .NE. 5) GOTO 230
0374 220 II = II + 1
0375 IORDER (II) = 22
0376 EXPENS (II) = CAHSTS
0377 C
0378 C =====
0379 C PROTECT SEEDLINGS
0380 C =====
0381 C
0382 C
0383 C BUY, APPLY HERBICIDE (F1)
0384 C
0385 230 IF (LUO .EQ. 2 .OR. LUO .EQ. 3) GOTO 234
0386 II = II + 1
0387 IORDER (II) = 23
0388 EXPENS (II) = CABAH
0389 ACABAH = EXPENS (II)
0390 GOTO 235

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0391      234 ACABAH = 0.
0392      C
0393      C      ERECT ANIMAL FENCING (F2)
0394      C
0395      235 IF (LUO .EQ. 2) 236, 237
0396      236 IF (RVEGET (1) .EQ. 4) 239, 237
0397      237 IF (RANIMA (1) .EQ. 1 .OR. RSOCEC (1) .EQ. 1
0398          & .OR. RANIMA (2) .EQ. 1) 239, 240
0399      239 II = II + 1
0400          IORDER (II) = 24
0401          EXPENS (II) = CAEAF
0402      C
0403      C =====
0404      C      CLIMATE MANAGEMENT
0405      C =====
0406      C
0407      C
0408      C      SNOW FENCING (G1)
0409      C
0410      240 ICHECK = 0
0411          IF (RCLIMA (2) .EQ. 4) ICHECK = 1
0412          IF (LUO .GT. 2 .AND. RCLIMA (2) .EQ. 3) ICHECK = 1
0413          IF (ICHECK .EQ. 0) GOTO 250
0414          II = II + 1
0415          IORDER (II) = 25
0416          EXPENS (II) = CASF
0417          IF (LUO .EQ. 1 .OR. LUO .EQ. 4) GOTO 250
0418      C
0419      C      SEED NURSE CROP (G2)
0420      C
0421          II = II + 1
0422          IORDER (II) = 26
0423          EXPENS (II) = CASNC
0424      C
0425      C      IRRIGATE PLANTINGS (G3)
0426      C
0427      250 CALL TCONS (ICHECK)
0428          IF (ICHECK .EQ. 0) GOTO 260
0429          II = II + 1
0430          IORDER (II) = 27
0431          EXPENS (II) = CAIP
0432          IF (LUO .EQ. 1 .OR. LUO .EQ. 5) GOTO 260
0433          EXPENS (II) = EXPENS (II) - (EXPENS (II)*PCEQ19 (LUO-1))
0434      C
0435      C =====
0436      C      STABILIZE TOPSOIL STORAGE FILE
0437      C =====
0438      C
0439      260 II = II + 1
0440          IORDER (II) = 28
0441          EXPENS (II) = (ACACF + ACADH + ACABS + ACAUS +
0442              >      CABFN (RTOPSO (8)) + CABFP (RTOPSO (9)) +
0443              >      ACADF + ACABHM + ACAAHM + ACABAH) *
0444              >      (PFSTSP / 100.)
0445      C
0446      C =====

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0447 C ADMINISTRATION COSTS
0448 C =====
0449 C
0450 N = II
0451 II = II + 1
0452 IORDER (II) = 29
0453 TOTAL = 0.
0454 DO 270 I = 1, N
0455 270 TOTAL = TOTAL + EXPENS (I)
0456 EXPENS (II) = TOTAL * PFAC / 100.
0457 C
0458 C TOTAL COST
0459 C
0460 TCAR (LUO) = 0.
0461 DO 280 J=1, II
0462 280 TCAR (LUO) = TCAR (LUO) + EXPENS (J)
0463 IF (IPNTR .EQ. 2) 700, 10
0464 C
0465 C 0* EXISTS FOR THIS LUO. SET TCAR TO ZERO AND BRANCH TO 10
0466 C
0467 500 TCAR (LUO) = 0.
0468 GOTO 10
0469 C
0470 C ARRANGE FOR PRINTOUT IN INCREASING ORDER (DONE FOR OPUSE RUN)
0471 C
0472 600 IF (IPNTR .EQ. 3) RETURN
0473 IF (LER) CALL ERASE
0474 IF (LER) CALL HOME
0475 IPNTR = 2
0476 DO 610 I = 1, 5
0477 610 EKON (I) = TCAR (I)
0478 JJ = 1
0479 612 EMIN = AMIN1 (EKON (1), EKON (2), EKON (3), EKON (4), EKON (5))
0480 DO 615 LUO = 1, 5
0481 IF (EKON (LUO) .EQ. EMIN) 620, 615
0482 615 CONTINUE
0483 C
0484 C PRINT OUT MESSAGE(S) FOR 0*
0485 C
0486 620 IF (LUL .EQ. LUT) GOTO 622
0487 WRITE (LUL, 1000)
0488 622 GOTO (625, 630, 635, 640, 645) LUO
0489 625 WRITE (LUL, 2000) TTL
0490 GOTO 650
0491 630 WRITE (LUL, 2100) TTL
0492 GOTO 650
0493 635 WRITE (LUL, 2200) TTL
0494 GOTO 650
0495 640 WRITE (LUL, 2300) TTL
0496 GOTO 650
0497 645 WRITE (LUL, 2400) TTL
0498 650 IF (EKON (LUO) .GT. 0.) GOTO 10
0499 WRITE (LUL, 3200)
0500 GOTO (655, 660, 663, 665, 670) LUO
0501 655 IF (IFLCK (1) .EQ. 1) WRITE (LUL, 4100)
0502 IF (IFLCK (2) .EQ. 1) WRITE (LUL, 4000)

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0503      IF (IFLCK (3) .EQ. 1) WRITE (LUL, 4200)
0504      IF (IFLCK (4) .EQ. 1) WRITE (LUL, 5002)
0505      IF (GCPA (1) .EQ. 0.) WRITE (LUL, 4500)
0506      GOTO 680
0507 660  IF (GCPA (2) .EQ. 0) WRITE (LUL, 4500)
0508      IF (IFLCK (4) .EQ. 1) WRITE (LUL, 5002)
0509      IF (IFLCK (5) .EQ. 1) WRITE (LUL, 5003)
0510      GOTO 680
0511 663  IF (GCPA (3) .EQ. 0.) WRITE (LUL, 4500)
0512      IF (IFLCK (3) .EQ. 1) WRITE (LUL, 5001)
0513      IF (IFLCK (5) .EQ. 1) WRITE (LUL, 5003)
0514      GOTO 680
0515 665  IF (IFLCK (5) .EQ. 1) WRITE (LUL, 4400)
0516      IF (IFLCK (3) .EQ. 1) WRITE (LUL, 5001)
0517      IF (IFLCK (4) .EQ. 1) WRITE (LUL, 5002)
0518      IF (GCPA (4) .EQ. 0.) WRITE (LUL, 4500)
0519      GOTO 680
0520 670  IF (IFLCK (1) .EQ. 1) WRITE (LUL, 4100)
0521      IF (IFLCK (2) .EQ. 1) WRITE (LUL, 4000)
0522      IF (IFLCK (3) .EQ. 1) WRITE (LUL, 4200)
0523      IF (IFLCK (4) .EQ. 1) WRITE (LUL, 4300)
0524      IF (IFLCK (5) .EQ. 1) WRITE (LUL, 4400)
0525      IF (GCPA (5) .EQ. 0.) WRITE (LUL, 4500)
0526  C
0527  C      RESET EKON AND GET THE NEXT LUD
0528  C
0529 680  IF (.NOT.LEK .OR. LUL.NE.LUT) GOTO 690
0530      CALL BELL
0531      CALL TINPT (1ANS)
0532      CALL ERASE
0533      CALL HOME
0534 690  EKON (LUD) = 999999.
0535      JJ = JJ + 1
0536      IF (JJ .GT. 5) RETURN
0537      GOTO 612
0538  C
0539  C      WRITE OUT THE TECHNIQUES LIST AND CHECK FOR FLAGS
0540  C
0541 700  WRITE (LUL, 3001)
0542 711  DO 715 I = 1, 11
0543      IF (IORDER (I) .EQ. 7) GOTO 712
0544      WRITE (LUL,3100) I, (RCLTEC (IORDER (I),K),K=1,20), EXPENS (I)
0545      GOTO 715
0546 712  DO 714 L = 1, NU
0547      IF (IWHERE (L) .EQ. 0) GOTO 714
0548      WRITE (LUL, 3102) (RCLTEC (IORDER(I),K), K = 1,14),
0549      >          IWHERE (L), CARHL (L)
0550      IPTRO = 1
0551 714  CONTINUE
0552      IF (IPTRO .EQ. 0) GOTO 715
0553      IF (RGENDE (1) .EQ. 1) WRITE (LUL, 3103) I, EXPENS (I)
0554 715  CONTINUE
0555      WRITE (LUL, 3151) TCAR (LUD)
0556      GTOTAL = AREA (LUD) * TCAR (LUD) / 1000000.
0557      WRITE (LUL,3152) AREA (LUD), GTOTAL
0558      GOTO (720, 725, 730, 680, 740) LUD

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0559      720 IF (IFLCK (5) .EQ. 1) WRITE (LUL, 5000)
0560          GOTO 680
0561      725 IF (IFLCK (3) .EQ. 1) WRITE (LUL, 5000)
0562          GOTO 680
0563      730 IF (IFLCK (4) .EQ. 1) WRITE (LUL, 5000)
0564          GOTO 680
0565      740 IF (IFLCK (6) .EQ. 1) WRITE (LUL, 5004)
0566          GOTO 680
0567      C
0568      C      FORMAT STATEMENTS
0569      C
0570      1000 FORMAT (1H1)
0571      C
0572      C
0573      2000 FORMAT ( 1X, 40A2, /, 10X'*** CROPLAND ALTERNATIVE ***' /)
0574      C
0575      2100 FORMAT (1X,40A2, /,7X'*** NATIVE VEGETATION ALTERNATIVE ***'
0576          > /)
0577      C
0578      2200 FORMAT ( 1X, 40A2, /, 10X'*** WILDLIFE ALTERNATIVE ***' /)
0579      C
0580      2300 FORMAT (1X, 40A2, /, 8X'*** WATER RECREATION ALTERNATIVE ***'/)
0581      C
0582      2400 FORMAT ( 1X, 40A2, /, 10X'*** HIGH USE ALTERNATIVE ***' /)
0583      C
0584      3001 FORMAT (15X'TECHNIQUE'21X'COST/ACRE'/, 15X, 9 ('-'),
0585          *21X, 9 ('-'))
0586      C
0587      3102 FORMAT (2X'> ',14A2,I2,11X'F8.2)
0588      C
0589      3103 FORMAT (1X,I2') TOTAL REHANDLE COST IS 'F8.2' DOLLARS/ACRE')
0590      C
0591      3100 FORMAT (1X, I2')', 20A2, 1X, '$'1X, F7.2)
0592      C
0593      3151 FORMAT (/, 45X, 9 ('='), /, 37X'TOTAL'3X'$'1X, F8.2/)
0594      C
0595      3152 FORMAT (1X 'GRAND TOTAL COST FOR 'F7.1' ACRES IS 'F13.2,1X
0596          >'MILLION DOLLARS')
0597      C
0598      3200 FORMAT (/, 3X'REGARDLESS OF OTHER ENVIRONMENTAL CONSIDERATIONS',
0599      C
0600          *3X'REFLECTED IN THE FEASIBILITY RANKING, THE TECHNIQUES'/,
0601      C
0602          *3X'LIST IS NOT AVAILABLE FOR THIS ALTERNATIVE BECAUSE :'/)
0603      C
0604      4000 FORMAT ( 7X'** THE AVERAGE SLOPE OF THE AREA EXCEEDS THE'/,
0605          * 7X' MAXIMUM (5.7 DEG/8 PERCENT) REQUIRED TO'/,
0606          * 7X' FEASIBLY RECLAIM TO THIS ALTERNATIVE.'/)
0607      C
0608      4100 FORMAT (7X'** THE HIGHWALL AND SPOIL PILE ASSOCIATED WITH'/,
0609          * 7X' THIS BOX CUT CANNOT BE GRADED TO THE'/,
0610          * 7X' MAXIMUM SLOPE (5.7 DEGREES/8 PERCENT) REQUIRED'/,
0611          * 7X' TO FEASIBLY RECLAIM TO THIS ALTERNATIVE.'/)
0612      C
0613      4200 FORMAT (7X'** THIS LAND USE OPTION IS NOT COMPATIBLE WITH'/,
0614          * 7X' THE PRESENCE OF THREATENED OR ENDANGERED'/,

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0615      *          7X"  PLANT SPECIES."/)
0616 C
0617 4300 FORMAT (7X"** THIS LAND USE OPTION IS NOT COMPATABLE WITH"/,
0618      *          7X"  THE PRESENCE OF THREATENED OR ENDANGERED"/,
0619      *          7X"  ANIMAL SPECIES."/)
0620 C
0621 4400 FORMAT (7X"** THIS LAND USE OPTION IS NOT COMPATABLE WITH"/,
0622      *          7X"  PRIME AGRICULTURAL LAND"/)
0623 C
0624 4500 FORMAT (7X"** GRADING COSTS HAVE NOT BEEN COMPUTED FOR"/,
0625      *          7X"  THIS ALTERNATIVE"/)
0626 C
0627 C
0628 5000 FORMAT (/, 5X"** PRESENT LAWS INDICATE THAT YOU MUST RECLAIM"/,
0629      *          5X"  TO THIS LAND USE OPTION"/)
0630 C
0631 5001 FORMAT (/, 5X"** THIS LAND USE OPTION MAY BE COMPATABLE"/,
0632      *          5X"  WITH THE PRESENCE OF THREATENED OR ENDANGERED"/,
0633      *          5X"  PLANT SPECIES, BUT AS A SECONDARY USE ONLY")
0634 C
0635 5002 FORMAT (/, 5X"** THIS LAND USE OPTION MAY BE COMPATABLE WITH"
0636      * /          5X"  THE PRESENCE OF THREATENED OR ENDANGERED"/,
0637      *          5X"  ANIMAL SPECIES, BUT AS A SECONDARY USE ONLY")
0638 C
0639 5003 FORMAT (/, 5X"** THIS LAND USE OPTION MAY BE COMPATABLE WITH"/,
0640      *          5X"  PRIME AGRICULTURAL LAND, BUT AS A SECONDARY USE"
0641      *          1X"ONLY")
0642 C
0643 5004 FORMAT (/, 5X"** THIS LAND USE OPTION ASSUMES THAT THE"/,
0644      *5X"  ALLUVIAL VALLEY FLOOR CAN BE LEGALLY ELIMINATED."/)
0645 C
0646      END
0647 END$

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8TFCD T=00004 IS ON CR00015 USING 00035 BLKS R=0236

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0001  FTN4
0002                      SUBROUTINE TFCD
0003  C          --- TEST FOR COMPLETE DATA ---
0004  C
0005  C LEVEL 1
0006  C
0007  C TFCD IS ACCESSED BY CLAIM TO REPORT THE STATUS OF THE CURRENT
0008  C DATA SET. IF THE DATA ARE INCOMPLETE, TFCD REPORTS THE LOCATION
0009  C OF THE NEXT DATA ITEM TO BE ENTERED, AND OFFERS THE USER THE
0010  C OPTION OF COMPLETING DATA ENTRIES. (ACTUAL COMPLETION OF DATA
0011  C INPUT IS NOT HANDLED IN THIS ROUTINE). THE METHOD IS TO SEARCH
0012  C FOR THE FIRST "ZERO" RESPONSE VALUE.
0013  C
0014  C ON ENTRY, "IPNTR" IS USED AS FOLLOWS :
0015  C     IPNTR=1.  TEST THE GENERAL DESCRIPTION
0016  C     IPNTR=2.  TEST THE ENVIRONMENTAL FEASIBILITY CATEGORIES
0017  C     IPNTR=3.  TEST THE ENTIRE DATA SET
0018  C
0019  C ON RETURN, "IOPTN" IS USED AS FOLLOWS :
0020  C     IOPTN=0.  DATA IS COMPLETE
0021  C     IOPTN=1.  DATA IS INCOMPLETE, BUT THE USER WANTS TO FINISH
0022  C                 DATA ENTRIES.
0023  C     IOPTN=2.  DATA IS INCOMPLETE, AND THE USER DOES NOT WISH
0024  C                 TO COMPLETE DATA ENTRIES.
0025  C
0026  C IF "IPNTR" IS 3 ON ENTRY, AND THE GENERAL DESCRIPTION CATEGORY
0027  C RESPONSES ARE INCOMPLETE, IPNTR IS SET TO 1 BEFORE TERMINATION.
0028  C
0029  C THE STATUS OF THE SPOILS GRADING PARAMETERS IS REPORTED FOR
0030  C IPNTR = 1 OR 3, BUT NO ACTION IS TAKEN IF ALL LAND USE OPTIONS
0031  C ARE NOT DEFINED. IF GENERAL DESCRIPTION CATEGORY RESPONSES ARE
0032  C INCOMPLETE, THE STATUS OF THE SPOILS GRADING DATA IS NOT REPORTED
0033  C
0034  C "EXIT" IS SET TO THE NEXT CATEGORY NUMBER REQUIRING INPUT
0035  C "LEXIT" IS SET TO THE NEXT HEADING NUMBER REQUIRING INPUT
0036  C
0037  C
0038  C THE CALLING SEQUENCE IS :          CALL TFCD
0039  C
0040  C TFCD USES THE TCS ROUTINES : BELL,ERASE,HOME, AND TINPT.
0041  C
0042  C "ICHAR" IS THE TINPT RETURN CELL.
0043  C
0044  C TFCD DECLARES LABEL COMMON "ALTRN" AND LABEL COMMON "TABLE".
0045  C
0046  C THIS ROUTINE WAS WRITTEN BY GREEN
0047  C
0048  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0049  C
0050  C =====
0051  C
0052  C     TEKTRONIX COMMON
0053  C
0054  C     COMMON ITEK (45)
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0055 C
0056 C LOGICAL UNITS AND COMMON LOCATION
0057 C
0058 COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0059 C
0060 C POINTERS
0061 C
0062 COMMON EXIT ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0063 COMMON IOPTN ,IOVR(7),IPNTR ,ISOC(6),ISUB(8)
0064 COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT ,LUO
0065 COMMON MODE ,NANM ,NCLI ,NGEN ,NGRW
0066 COMMON NOVR ,NSECTS ,NSOC ,NSUB ,NSUR
0067 COMMON NTOP ,NU ,NVEG
0068 C
0069 C GRADING PARAMETERS
0070 C
0071 COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCPA(5)
0072 COMMON GROVBS(5),HWHT(5,10),HWSLI(5,10),NSPP(5),PCEQ19(4)
0073 COMMON PERCNT(5,10),REHCPY(5),REHVOL(5),SLOPE(5,10),WBF
0074 C
0075 C CATEGORY TEXT
0076 C
0077 COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0078 COMMON OVRBD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0079 COMMON TPSL(49,13),VGTA(15,13)
0080 C
0081 C EXPECTATION VALUES
0082 C
0083 COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0084 COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0085 COMMON TOPSOI(33,6),VEGETA(10,6)
0086 C
0087 C CATEGORY RESPONSES
0088 C
0089 COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0090 COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0091 COMMON RTOPSO(9),RVEGET(2)
0092 C
0093 C FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0094 C
0095 COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHM
0096 COMMON CABS(2),CAC,CACP,CADF,CADH
0097 COMMON CADS,CAEAF,CAHSAF,CAHSTS,CAIF
0098 COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0099 COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0100 COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0101 C
0102 INTEGER EXIT,CLMA,GDES,GWHY,OVRBD,SBSL
0103 INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0104 INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0105 INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0106 INTEGER VEGETA,ANIMAL
0107 INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0108 INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0109 INTEGER RCLTEC,TTL
0110 C

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0111      INTEGER COMMON (1)
0112      EQUIVALENCE (COMMON (1), ITEK (1))
0113      EQUIVALENCE (IARRY (1), LUT)
0114      EQUIVALENCE (IARY2 (1), ISTRK)
0115      EQUIVALENCE (IARY2 (2), ISECT)
0116      EQUIVALENCE (IARY2 (3), ICODE)
0117      EQUIVALENCE (IARY2 (4), LEN)
0118  C
0119      LOGICAL LER
0120  C
0121  C =====
0122  C
0123      COMMON /ALTRN/ ALTN
0124      COMMON /CTIL/ ICAT
0125      INTEGER ALTN(6,4),ICAT(10,12),IHEAD(9)
0126      DATA IHEAD/2H A,2H B,2H C,2H D,2H E,2H F,2H G,2H H,2H I/
0127  C
0128  C
0129  C          ASSUME ALL DATA IS ENTERED
0130      IOPTN=0
0131      IF(LER) CALL ERASE
0132      IF(LER) CALL HOME
0133  C          BRANCH TO 200 IF WE ARE CHECKING ENVIRONMENTAL
0134  C          FEASIBILITY CATEGORIES ONLY.
0135      IF(IPNTR.EQ.2) GOTO 200
0136  C          TEST GENERAL DESCRIPTION CATEGORY RESPONSES
0137      EXIT=1
0138      DO 100 LEXIT=1,NGEN
0139          IF(RGENDE(LEXIT).EQ.0) GOTO 500
0140 100 CONTINUE
0141  C          GENERAL DESCRIPTION RESPONSES ARE COMPLETE
0142  C          REPORT STATUS OF SPOILS GRADING PARAMETERS
0143      KPASS=0
0144      WRITE(LUT,1000)
0145      DO 110 LUO=1,5
0146          IF(NSPP(LUO).EQ.0) GOTO 110
0147          KPASS=1
0148          WRITE(LUT,1010) (ALTN(LUO,J),J=1,4)
0149 110 CONTINUE
0150          IF(KPASS.EQ.0) WRITE(LUT,1020)
0151  C          DONE WITH GENERAL DESCRIPTION CHECK.
0152  C          PROCEED IF WE'RE CHECKING THE WHOLE
0153  C          SHEBANG, OTHERWISE, RETURN
0154      IF(IPNTR.EQ.3) GOTO 200
0155 115      IF(LER) WRITE(LUT,1030)
0156          IF(LER) CALL BELL
0157          IF(LER) CALL TINPT(1CHAR)
0158      IPNTR=1
0159      RETURN
0160  C          ENVIRONMENTAL FEASIBILITY CATEGORY CHECK
0161  C          START WITH CLIMATOLOGY
0162 200 EXIT=2
0163      DO 210 LEXIT=1,NCLI
0164          IF(RCLIMA(LEXIT).EQ.0) GOTO 500
0165 210 CONTINUE
0166  C          TOPSOIL

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0167      EXIT=3
0168      DO 220 LEXIT=1,NTOP
0169          IF(RTOPSO(LEXIT).EQ.0) GOTO 500
0170 220 CONTINUE
0171 C          SUBSOIL
0172      EXIT=4
0173      DO 230 LEXIT=1,NSUB
0174          IF(RSUBSO(LEXIT).EQ.0) GOTO 500
0175 230 CONTINUE
0176 C          OVERBURDEN
0177      EXIT=5
0178      LEXIT=1
0179          IF(ROVRBD(1,1).EQ.0) GOTO 500
0180      DO 240 LU=1,NU+1
0181          IF(ROVRBD(1,LU).EQ.0) GOTO 245
0182          DO 235 LEXIT=3,NOVR+1
0183          IF(ROVRBD(LEXIT-1,LU).EQ.0) GOTO 500
0184 235 CONTINUE
0185 240 CONTINUE
0186 C          SURFACE WATER HYDROLOGY
0187 245 EXIT=6
0188      DO 250 LEXIT=1,NSUR
0189          IF(RSURHY(LEXIT).EQ.0) GOTO 500
0190 250 CONTINUE
0191 C          GROUND WATER HYDROLOGY
0192      EXIT=7
0193      DO 260 LEXIT=1,NGRW
0194          IF(RGRWHY(LEXIT).EQ.0) GOTO 500
0195 260 CONTINUE
0196 C          VEGETATION
0197      EXIT=8
0198      DO 270 LEXIT=1,NVEG
0199          IF(RVEGET(LEXIT).EQ.0) GOTO 500
0200 270 CONTINUE
0201 C          ANIMALS
0202      DO 280 LEXIT=1,NANM
0203          IF(RANIMA(LEXIT).EQ.0) GOTO 500
0204 280 CONTINUE
0205 C          SOCIO-ECONOMICS
0206      DO 290 LEXIT=1,NSOC
0207          IF(RSOCEC(LEXIT).EQ.0) GOTO 500
0208 290 CONTINUE
0209 C          WE MADE IT THROUGH. THE DATA SET IS
0210 C          THEREFORE COMPLETE. SET IOPTN
0211 C          TO ZERO AND QUIT.
0212      IOPTN=0
0213          IF (LER) WRITE (LUT,1030)
0214          IF (LER) CALL BELL
0215          IF (LER) CALL TINPT (ICAR)
0216      RETURN
0217 C          INCOMPLETE DATA. DISPLAY CATEGORY AND
0218 C          HEADING NUMBER OF NEXT DATA ITEM TO BE
0219 C          ENTERED - SEE IF USER WANTS TO COMPLETE
0220 C          DATA ENTRIES - RETURN.
0221 500 WRITE(LUT,1040) (ICAT(EXIT,J),J=1,12),IHEAD(LEXIT)
0222 510 READ(LUT,1050) IANS

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0223      IF(IANS.EQ.1HY .OR. IANS.EQ.1HN ) GOTO 520
0224      WRITE(LUT,1060) IANS
0225      GOTO 510
0226  520   IF(IANS.EQ.1HY) IOPTN=1
0227      IF(IANS.EQ.1HN) IOPTN=2
0228      IF(EXIT.EQ.1.AND.IFNTR.EQ.3) GOTO 115
0229      RETURN
0230  C      FORMAT STATEMENTS
0231  1000  FORMAT(//10X"SPOILS GRADING DATA HAVE BEEN ENTERED FOR:"//)
0232  1010  FORMAT(10X"THE "A2" LAND USE ALTERNATIVE"/)
0233  1020  FORMAT(10X"** NONE OF THE LAND USE ALTERNATIVES **")
0234  1030  FORMAT(///,5X,"HIT THE RETURN KEY TO CONTINUE...._")
0235  1040  FORMAT(///,5X"CATEGORY RESPONSES ARE NOT COMPLETE STARTING"/
0236      >      5X,"AT ",12A2," HEADING "A2,/,
0237      >      5X"DO YOU WISH TO COMPLETE DATA ENTRIES ? (Y/N) ->_")
0238  1050  FORMAT(A2)
0239  1060  FORMAT(5X,A2" ?? PLEASE RE-ENTER YOUR ANSWER -> _")
0240      END
0241  END$

```



&TOPSO T=00004 IS ON CR00015 USING 00056 BLKS R=0000

```
0001  FTN4
0002                SUBROUTINE TOPSO
0003  C      FULL DISPLAY--CATEGORY 3 / TOPSOIL
0004  C
0005  C LEVEL 2
0006  C
0007  C TOPSO IS ACCESSED BY EIFD TO SCHEDULE INPUTS AND EDITS TO
0008  C CATEGORY RESPONSES, AND EDITS TO THE EXPECTATION OF SUCCESS
0009  C VALUES FOR CATEGORY 3 - TOPSOIL, USING FULL DISPLAY
0010  C
0011  C THE CALLING SEQUENCE IS :          CALL TOPSO
0012  C
0013  C TOPSO USES THE TCS ROUTINES : ERASE AND HOME
0014  C
0015  C THE LOCAL VARIABLES ARE :
0016  C
0017  C      IANS    -> ANSWER CELL
0018  C      II      -> "I" INDEX I (I,J) 3 TO TOPSOI ARRAY
0019  C      IOLD    -> PRE-EDIT CATEGORY RESPONSE VALUE
0020  C      LUORN   -> LAND USE OPTION REFERENCE NUMBER
0021  C              1 -> CROPLAND
0022  C              2 -> NATIVE VEGETATION
0023  C              3 -> WILDLIFE
0024  C              4 -> WATER RECREATION
0025  C              5 -> HIGH USE
0026  C              6 -> OTHER
0027  C      NN      -> HEADING NUMBER
0028  C
0029  C
0030  C TOPSO IS SWAPPED IN BY PROGRAM TOPSX
0031  C
0032  C THIS ROUTINE WAS WRITTEN BY GREEN
0033  C
0034  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0035  C =====
0036  C
0037  C      TEKTRONIX COMMON
0038  C
0039  C      COMMON ITEK (45)
0040  C
0041  C      LOGICAL UNITS AND COMMON LOCATION
0042  C
0043  C      COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0044  C
0045  C      POINTERS
0046  C
0047  C      COMMON EXIT    ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0048  C      COMMON IOFTN   ,IOVR(7),IPNTR  ,ISOC(6),ISUB(8)
0049  C      COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT  ,LUO
0050  C      COMMON MODE    ,NANM    ,NCLI    ,NGEN    ,NGRW
0051  C      COMMON NOVR    ,NSECTS ,NSOC    ,NSUB    ,NSUR
0052  C      COMMON NTOP    ,NU      ,NVEG
0053  C
0054  C      GRADING PARAMETERS
```

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0055 C
0056 COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCPA(5)
0057 COMMON GROVBS(5),HWHT(5,10),HWSLI(5,10),NSFP(5),PCEQ19(4)
0058 COMMON PERCNT(5,10),REHCFY(5),REHVOL(5),SLOPE(5,10),WBP
0059 C
0060 C CATEGORY TEXT
0061 C
0062 COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0063 COMMON OVRD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0064 COMMON TPSL(49,13),VGTA(15,13)
0065 C
0066 C EXPECTATION VALUES
0067 C
0068 COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0069 COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0070 COMMON TOPSOI(33,6),VEGETA(10,6)
0071 C
0072 C CATEGORY RESPONSES
0073 C
0074 COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0075 COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0076 COMMON RTOPSO(9),RVEGET(2)
0077 C
0078 C FEAS1,TECON,OPUSE SUBSYSTEM PARAMETERS
0079 C
0080 COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CAHBM
0081 COMMON CABS(2),CAC,CACF,CADF,CADH
0082 COMMON CAIS,CAEAF,CAHSAF,CAHSTS,CAIF
0083 COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0084 COMMON CSTRF,FAVG(5),PFSTSF,PFAC,RCLTEC(29,34)
0085 COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0086 C
0087 INTEGER EXIT,CLMA,GDES,GWHY,OVRD,SBSL
0088 INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0089 INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0090 INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0091 INTEGER VEGETA,ANIMAL
0092 INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0093 INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0094 INTEGER RCLTEC,TTL
0095 C
0096 INTEGER COMMON (1)
0097 EQUIVALENCE (COMMON (1), ITEK (1))
0098 EQUIVALENCE (IARY (1), LUT)
0099 EQUIVALENCE (IARY2 (1), ISTRK)
0100 EQUIVALENCE (IARY2 (2), ISECT)
0101 EQUIVALENCE (IARY2 (3), ICODE)
0102 EQUIVALENCE (IARY2 (4), LEN)
0103 C
0104 LOGICAL LER
0105 C
0106 C DISPLAY MODE
0107 1 IF (.NOT.LER) GOTO 5
0108 CALL ERASE
0109 CALL HOME
0110 5 GOTO (10,20,30) MODE

```



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0111      10 WRITE (LUT,1010)
0112      GOTO 40
0113      20 WRITE (LUT,2010)
0114      GOTO 40
0115      30 WRITE (LUT,3010)
0116      40 IF (MODE.GT.1) GOTO 50
0117      GOTO (100,200,250,300,350,400,450,500,550) LEXIT
0118 C      USER INPUT -> EDIT HEADING
0119      50 WRITE (LUT,2020)
0120      51 READ (LUT,2030) IANS
0121          IF (IANS.EQ.2HA ) GOTO 100
0122          IF (IANS.EQ.2HB ) GOTO 200
0123          IF (IANS.EQ.2HC ) GOTO 250
0124          IF (IANS.EQ.2HD ) GOTO 300
0125          IF (IANS.EQ.2HE ) GOTO 350
0126          IF (IANS.EQ.2HF ) GOTO 400
0127          IF (IANS.EQ.2HG ) GOTO 450
0128          IF (IANS.EQ.2HH ) GOTO 500
0129          IF (IANS.EQ.2HI ) GOTO 550
0130          IF (IANS.EQ.2HNO) RETURN
0131      WRITE (LUT,1200)
0132      GOTO 51
0133 C      CHECK FOR ADM RUN (IARRY(2) = 3)
0134      100 NN = 1
0135      WRITE (LUT,1000) (TPSL (1,1),I = 1,13)
0136          IF (IARRY (2).EQ.3) GOTO 200
0137 C      DISPLAY HEADING A -> THICKNESS
0138          J = 1
0139          L = J - 1
0140      WRITE (LUT,1020)
0141      WRITE (LUT,1050) (TPSL (2,1),I = 1,13)
0142      DO 105 K = 3,6
0143      WRITE (LUT,1100) (TPSL (K,I),I = 1,13),(TOPSOI (J,I),I = 1,6)
0144      105 J = J+1
0145      GOTO (140,135,110) MODE
0146 C      EDIT EXPECTATIONS
0147 C      USER INPUT -> SUBHEADING NUMBER
0148      110 II = 0
0149      WRITE (LUT,3020)
0150      111 READ (LUT,*) II
0151      GOTO 145
0152 C      USER INPUT -> LAND USE OPTION REFERENCE NUMBER
0153      115 WRITE (LUT,3030)
0154      116 READ (LUT,*) LUORN
0155          IF (LUORN.GE.1.AND.LUORN.LE.6) GOTO 120
0156      WRITE (LUT,1200)
0157      GOTO 116
0158      120 IF (NN.EQ.1) GOTO 130
0159      II = II + L
0160 C      USER INPUT -> EXPECTATION VALUE
0161      130 WRITE (LUT,3040)
0162      131 READ (LUT,*) TOPSOI (II,LUORN)
0163          IF(TOPSOI(II,LUORN).GE.0.AND.TOPSOI(II,LUORN).LE.4)
0164      > GOTO 600
0165      WRITE (LUT,3050)
0166      GOTO 131

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0167 C                                EDIT RESPONSES
0168 C                                USER INPUT -> HEADING 'A' CHANGE
0169 135 WRITE (LUT,2045)
0170 136 READ (LUT,*) IANS
0171      IF (IANS.EQ.0) GOTO 600
0172      IF (IANS.GE.1.AND.IANS.LE.4) GOTO (137,176,151,166) IANS
0173      WRITE (LUT,1200)
0174      GOTO 136
0175 137 IOLD = RTOPSO (NN)
0176 138 WRITE (LUT,2040) IOLD
0177      GOTO 144
0178 C                                INPUT CATEGORY RESPONSES
0179 C                                USER INPUT -> RTOPSO (NN)
0180 140 WRITE (LUT,2000)
0181 144 READ (LUT,*) RTOPSO (NN)
0182      IF (RTOPSO (NN).EQ.0) GOTO (900,146) MODE
0183      II = RTOPSO (NN)
0184 145 IF (II.GE.1.AND.II.LE.ITOP (NN)) GOTO (700,600,115) MODE
0185 146 WRITE (LUT,1200)
0186      GOTO (144,144,111) MODE
0187 150 IF (MODE.EQ.1) GOTO 160
0188 C                                USER INPUT -> COST TO REMOVE TOPSOIL
0189 151 WRITE (LUT,2050) CSTRM
0190 160 WRITE (LUT,1025)
0191      READ (LUT,*) CSTRM
0192      GOTO (170,600) MODE
0193 C                                USER INPUT -> COST TO REPLACE TOPSOIL
0194 166 WRITE (LUT,2060) CSTRP
0195 170 WRITE (LUT,1026)
0196      READ (LUT,*) CSTRP
0197      GOTO (180,600) MODE
0198 C                                USER INPUT -> ACTUAL THICKNESS OF TOPSOIL
0199 176 WRITE (LUT,2070) THKTS
0200 180 WRITE (LUT,1027)
0201      READ (LUT,*) THKTS
0202      GOTO (200,600) MODE
0203 C                                DISPLAY HEADING B -> PERCENT ORGANIC MATTER
0204 200 NN = 2
0205      IF (.NOT.LER) GOTO 205
0206      CALL ERASE
0207      CALL HOME
0208      WRITE (LUT,1000) (TPSL (1,I),I = 1,13)
0209 205 WRITE (LUT,1020)
0210      J = ITOP (1) + 1
0211      L = J - 1
0212      WRITE (LUT,1050) ( (TPSL (K,I),I = 1,13),K = 7,8)
0213      DO 210 K = 9,11
0214      WRITE (LUT,1100) (TPSL (K,I),I = 1,13), (TOPSOI (J,I),I = 1,6)
0215 210 J = J+1
0216 211 GOTO (140,137,110) MODE
0217 C                                DISPLAY HEADING C -> TEXTURE
0218 250 NN = 3
0219      IF (.NOT.LER) GOTO 255
0220      CALL ERASE
0221      CALL HOME
0222      WRITE (LUT,1000) (TPSL (1,I),I = 1,13)

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0223 255 J = ITOP (1) + ITOP (2) + 1
0224 L = J - 1
0225 WRITE (LUT,1020)
0226 WRITE (LUT,1050) (TPSL (12,1),1 = 1,13)
0227 DO 260 K = 13,18
0228 WRITE (LUT,1100) (TPSL (K,I),I = 1,13),(TOPSOI (J,I),I = 1,6)
0229 260 J = J+1
0230 GOTO 211
0231 C DISPLAY HEADING D -> STRUCTURE
0232 300 NN = 4
0233 IF (.NOT.LER) GOTO 303
0234 CALL ERASE
0235 CALL HOME
0236 WRITE (LUT,1000) (TPSL (1,I),I = 1,13)
0237 303 J = ITOP (1) + ITOP (2) + ITOP (3) + 1
0238 L = J - 1
0239 WRITE (LUT,1020)
0240 WRITE (LUT,1050) ( (TPSL (K,1),I = 1,13),K = 19,20)
0241 DO 305 K = 21,23
0242 WRITE (LUT,1100) (TPSL (K,I),I = 1,13),(TOPSOI (J,1),I = 1,6)
0243 305 J = J+1
0244 GOTO 211
0245 C DISPLAY HEADING E -> BULK DENSITY
0246 350 NN = 5
0247 IF (.NOT.LER) GOTO 355
0248 CALL ERASE
0249 CALL HOME
0250 WRITE (LUT,1000) (TPSL (1,I),I = 1,13)
0251 355 WRITE (LUT,1020)
0252 J = ITOP (1) + ITOP (2) + ITOP (3) + ITOP (4) + 1
0253 L = J - 1
0254 WRITE (LUT,1050) ( (TPSL (K,I),I = 1,13),K = 24,25)
0255 DO 360 K = 26,27
0256 WRITE (LUT,1100) (TPSL (K,I),I = 1,13),(TOPSOI (J,I),I = 1,6)
0257 360 J = J+1
0258 GOTO 211
0259 C DISPLAY HEADING F -> SALINITY
0260 400 NN = 6
0261 IF (.NOT.LER) GOTO 405
0262 CALL ERASE
0263 CALL HOME
0264 WRITE (LUT,1000) (TPSL (1,I),I = 1,13)
0265 405 WRITE (LUT,1020)
0266 J = ITOP (1) + ITOP (2) + ITOP (3) + ITOP (4) + ITOP (5) + 1
0267 L = J - 1
0268 WRITE (LUT,1050) (TPSL (28,I),I = 1,13)
0269 DO 410 K = 29,33
0270 WRITE (LUT,1100) (TPSL (K,I),I = 1,13),(TOPSOI (J,I),I = 1,6)
0271 410 J = J+1
0272 GOTO 211
0273 C DISPLAY HEADING G -> SODIUM ADSORPTION RATIO
0274 450 NN = 7
0275 IF (.NOT.LER) GOTO 455
0276 CALL ERASE
0277 CALL HOME
0278 455 WRITE (LUT,1000) (TPSL (1,I),I = 1,13)

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0279      WRITE (LUT,1020)
0280      J = ITOP (1) + ITOP (2) + ITOP (3) + ITOP (4) + ITOP (5) +
0281      + ITOP (6) + 1
0282      L = J - 1
0283      WRITE (LUT,1050) ( (TPSL (K,I),I = 1,13),K = 34,35)
0284      DO 460 K = 36,39
0285      WRITE (LUT,1100) (TPSL (K,I),I = 1,13),(TOPSOI (J,I),I = 1,6)
0286 460 J = J+1
0287      GOTO 211
0288 C      DISPLAY HEADING H -> NITROGEN
0289      500 NN = 8
0290      IF (.NOT.LER) GOTO 505
0291      CALL ERASE
0292      CALL HOME
0293      WRITE (LUT,1000) (TPSL (1,I),I = 1,13)
0294 505 WRITE (LUT,1020)
0295      J = ITOP (1) + ITOP (2) + ITOP (3) + ITOP (4) + ITOP (5) +
0296      + ITOP (6) + ITOP (7) + 1
0297      L = J - 1
0298      WRITE (LUT,1050) ( (TPSL (K,I),I = 1,13),K = 40,41)
0299      DO 510 K = 42,44
0300      WRITE (LUT,1100) (TPSL (K,I),I = 1,13),(TOPSOI (J,I),I = 1,6)
0301 510 J = J+1
0302      GOTO 211
0303 C      DISPLAY HEADING I -> PHOSPHORUS
0304      550 NN = 9
0305      IF (.NOT.LER) GOTO 555
0306      CALL ERASE
0307      CALL HOME
0308      WRITE (LUT,1000) (TPSL (1,I),I = 1,13)
0309 555 WRITE (LUT,1020)
0310      J = ITOP (1) + ITOP (2) + ITOP (3) + ITOP (4) + ITOP (5) +
0311      + ITOP (6) + ITOP (7) + ITOP (8) + 1
0312      L = J - 1
0313      WRITE (LUT,1050) ( (TPSL (K,I),I = 1,13),K = 45,46)
0314      DO 560 K = 47,49
0315      WRITE (LUT,1100) (TPSL (K,I),I = 1,13),(TOPSOI (J,I),I = 1,6)
0316 560 J = J+1
0317      GOTO 211
0318 C      USER INPUT -> MORE EDITS ?
0319      600 WRITE (LUT,3060)
0320      READ (LUT,2030) IANS
0321      IF (IANS.NE.2HYES) RETURN
0322      GOTO 1
0323 C      INPUT MODE -> DIRECT TO PROPER HEADING
0324      700 IF (NN.EQ.NTOP) RETURN
0325      GOTO (160,250,300,350,400,450,500,550) NN
0326 C      USER WANTS OUT -> SET EXIT TO ZERO AND RETURN
0327 900 EXIT = 0
0328      RETURN
0329 C      FORMAT STATEMENTS
0330 1025 FORMAT ( *COST TO REMOVE TOPSOIL (CENTS/CU.YD) -> _" )
0331 C
0332 1026 FORMAT ( *COST TO RESPREAD TOPSOIL (CENTS/CU.YD) -> _" )
0333 C
0334 1027 FORMAT ( *ACTUAL THICKNESS OF TOPSOIL (IN.) -> _" )

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0335 C
0336 2045 FORMAT(5X'WHERE IS YOUR CHANGE ?'/,
0337      &5X'0) NO CHANGE'/,
0338      &5X'1) THICKNESS (CATEGORY)'/,
0339      &5X'2) ACTUAL THICKNESS (INCHES)'/,
0340      &5X'3) COST TO REMOVE SOIL FOR STORAGE'/,
0341      &5X'4) COST TO RESPREAD TOPSOIL'/,
0342      &5X'ENTER YOUR CHOICE HERE -> _')
0343 2050 FORMAT ( 5X'COST TO REMOVE TOPSOIL IS CURRENTLY'F5.1,1X
0344      &'CENTS/CU.YD.'/)
0345 2060 FORMAT ( 5X'COST TO RESPREAD TOPSOIL IS CURRENTLY'F5.1,1X
0346      &'CENTS/CU.YD.'/)
0347 2070 FORMAT ( 5X'ACTUAL THICKNESS OF TOPSOIL IS CURRENTLY'F7.2,1X
0348      &'INCHES.'/)
0349 1000 FORMAT ( 13A2, 44 ('*'), /, 26X, '*',
0350      &10X, 'STANDARD EXPECTATIONS', 11X, '*', /,
0351      &26X, 44 ('*'), /, 26X, '*CROP*', 2X,
0352      &'NATIVE', 2X, '*WILD*', 2X, 'WATER', 3X,
0353      &'*HIGH*OTHER*', /, 26X,
0354      &'*LAND*VEGETATION*LIFE*RECREATION*USE *', 5X, '*')
0355 C
0356 1020 FORMAT (70 ('*'), /, 26X, '*4X*'10X*'4X*'10X*'4X*'5X*')
0357 C
0358 1050 FORMAT (13A2, '*', 4X, '*', 10X, '*', 4X, '*',
0359      &10X, '*', 4X, '*', 5X, '*')
0360 C
0361 1100 FORMAT (13A2,
0362      &'* '11' * 'I1' * 'I1' * 'I1' * 'I1' * '11' *')
0363 C
0364 1200 FORMAT (/ 'YOU HAVE TYPED IN AN ILLEGAL ANSWER.',
0365      &/, 'GIVE HER ANOTHER SHOT -> _')
0366 C
0367 2000 FORMAT ('ENTER THE APPROPRIATE ', 4X,
0368      &44 ('*'), /, 'NUMBER, OR ZERO TO QUIT -> _')
0369 C
0370 1010 FORMAT ( 17X'INPUT RESPONSES/TOPSOIL'//)
0371 C
0372 2010 FORMAT ( 17X'EDIT RESPONSES/TOPSOIL'//)
0373 C
0374 3010 FORMAT ( 17X'EDIT EXPECTATIONS/TOPSOIL'//)
0375 C
0376 2020 FORMAT (/, 5X'IN WHICH HEADING IS YOUR DESIRED EDIT?'/,
0377      &5X' (ENTER A,B,C,D,E,F,G,H, OR I OR NONE) -> _')
0378 C
0379 2030 FORMAT (A2)
0380 C
0381 2040 FORMAT (/, 5X'YOUR CURRENT RESPONSE IS ->'I1, //,
0382      &5X'ENTER YOUR NEW RESPONSE HERE -> _')
0383 C
0384 3020 FORMAT (/, 5X'IN WHICH SUB-HEADING IS THE EXPECTATION VALUE'/,
0385      &5X'YOU WISH TO CHANGE ? (ENTER THE APPROPRIATE NUMBER) -> _')
0386 C
0387 3030 FORMAT(/5X'SELECT THE LAND USE OPTION YOU WISH TO CHANGE'/
0388      > 1X' -1- / -2- / -3- / -4- / -5- / -6- '/')
0389      > 1X'CROPLAND/NAT.VEG./WILDLIFE/WAT.REC./HIGH USE/ OTHER/'
0390      >/5X'ENTER YOUR SELECTION HERE -> _')

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```
0391 C
0392 3040 FORMAT (/ , 5X'ENTER YOUR NEW EXPECTATION VALUE HERE -> _')
0393 C
0394 3050 FORMAT (/ , 5X'ERROR--> YOUR EXPECTATION VALUE MUST BE' / ,
0395 >5X'0,1,2,3, OR 4 TO AVOID INTRODUCING A BIAS -> _')
0396 C
0397 3060 FORMAT (/ , 5X'ANY MORE EDITS TO TOPSOIL ?' / ,
0398 &5X' (YES OR NO) -> _')
0399 C
0400 C
0401 END
0402 END$
0403 END
0404 END$
```



&TSBLA T=00004 IS ON CRO0015 USING 00033 BLKS R=0192

```
0001  FYN4
0002      SUBROUTINE TSBLA (IPTR,ICHB,PARAM1,PARAM2)
0003  C      ---TRUCK AND SHOVEL : BENCH LENGTH ADJUSTMENTS---
0004  C
0005  C  LEVEL 4
0006  C
0007  C  THIS ROUTINE ADJUSTS THE BENCH LENGTHS TO ACCOMODATE A CHANGE IN
0008  C  THE INITIAL BENCH WIDTHS, THE INITIAL HIGHWALL HEIGHTS, OR THE
0009  C  INITIAL HIGHWALL SLOPES, SO THAT THE ANGLES DEFINED BY THE INITIAL
0010  C  INPUT DATA REMAINS THE SAME FOR SEMI-CIRCULAR TRUCK AND SHOVEL
0011  C  PRODUCED SPOILS.
0012  C
0013  C  TSBLA IS ACCESSED BY TSIHB,TSSCI,TSXBA, AND TSIFN
0014  C
0015  C  THE CALLING SEQUENCE IS :
0016  C
0017  C      CALL TSBLA (IPTR,ICHB,PARAM1,PARAM2)
0018  C
0019  C  WHERE :
0020  C
0021  C      IPTR    -> POINTER :
0022  C              0 - TSBLA RETURNS THIS VALUE WHEN AT LEAST ONE
0023  C                  BENCH LENGTH EXCEEDED THE MAXIMUM POSSIBLE
0024  C              1 - ADJUST BENCH LENGTHS ON THE BASIS OF A CHANGE
0025  C                  IN BENCH "ICHB" WIDTH ONLY
0026  C              2 - ADJUST BENCH LENGTHS ON THE BASIS OF A CHANGE
0027  C                  IN BENCH "ICHB" AND "ICHB-1" WIDTHS
0028  C              3 - TEST FOR MAXIMUM & MINIMUM BENCH LENGTHS
0029  C              4 - ADJUST BENCH LENGTHS ON THE BASIS OF A CHANGE
0030  C                  IN THE INITIAL HIGHWALL HEIGHT
0031  C              5 - ADJUST BENCH LENGTHS ON THE BASIS OF A CHANGE
0032  C                  IN THE INITIAL HIGHWALL SLOPE
0033  C      ICHB    -> CURRENT HIGHWALL/BENCH NUMBER
0034  C      PARAM1  -> DEPENDING ON THE VALUE OF IPTR, THIS IS :
0035  C                  IPTR = 1 : THE NEW BENCH WIDTH FOR BENCH "ICHB"
0036  C                  IPTR = 4 : THE NEW HIGHWALL HEIGHT FOR BENCH "ICHB"
0037  C                  IPTR = 5 : THE NEW HIGHWALL SLOPE FOR BENCH "ICHB"
0038  C      PARAM2  -> THE NEW BENCH WIDTH FOR BENCH "ICHB-1"
0039  C                  (USED ONLY FOR IPTR = 2)
0040  C
0041  C
0042  C  SUBROUTINES SCHEDULED ARE :
0043  C
0044  C      BELL  (TCS)
0045  C      TINPT (TCS)
0046  C
0047  C  THE LOCAL VARIABLES ARE :
0048  C
0049  C      ADBCD  -> ANGLES DEFINED BY CURRENT DATA (RADIAN)
0050  C      BLMAX  -> MAXIMUM POSSIBLE BENCH LENGTH (FEET)
0051  C      BLMIN  -> MINIMUM POSSIBLE BENCH LENGTH (FEET)
0052  C      CMA    -> CURRENT MINIMUM ANGLE (RADIAN)
0053  C      ICHAR  -> TINPT RETURN
0054  C      ICHB1  -> NUMBER OF BENCHES THAT NEED ADJUSTING
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0055 C      RBOE    -> RADII OF BENCHES (OUTSIDE EDGE - FEET)
0056 C      XWIH    -> CROSS-SECTIONAL WIDTH OF INITIAL HIGHWALLS (FEET)
0057 C
0058 C THIS ROUTINE WAS WRITTEN BY GREEN
0059 C
0060 C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0061 C
0062 C
0063 C =====
0064 C
0065 C      TEKTRONIX COMMON
0066 C
0067 C      COMMON ITEK (45)
0068 C
0069 C      LOGICAL UNITS AND COMMON LOCATION
0070 C
0071 C      COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0072 C
0073 C      POINTERS
0074 C
0075 C      COMMON EXIT      ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0076 C      COMMON IOPTN     ,IOVR(7),IHB      ,ISOC(6),ISUB(8)
0077 C      COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT  ,LUO
0078 C      COMMON MODE      ,NANM      ,NCLI      ,NGEN      ,NGRW
0079 C      COMMON NOVR      ,NSECTS   ,NSOC      ,NSUB      ,NSUR
0080 C      COMMON NTOP      ,NU        ,NVEG
0081 C
0082 C      GRADING PARAMETERS
0083 C
0084 C      COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCPA(5)
0085 C      COMMON SPCC(5),HWHT(5,10),HWSLI(5,10),NHBP(5),PCEQ19(4)
0086 C      COMMON BENWF(5,10),REHCPY(5),REHVOL(5),HWSLF(5,10),USR
0087 C
0088 C      CATEGORY TEXT
0089 C
0090 C      COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0091 C      COMMON OVBD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0092 C      COMMON TP5L(49,13),VGTA(15,13)
0093 C
0094 C      EXPECTATION VALUES
0095 C
0096 C      COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0097 C      COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0098 C      COMMON TOPSOI(33,6),VEGETA(10,6)
0099 C
0100 C      CATEGORY RESPONSES
0101 C
0102 C      COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0103 C      COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0104 C      COMMON RTOPSO(9),RVEGET(2)
0105 C
0106 C      FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0107 C
0108 C      COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHM
0109 C      COMMON CABS(2),CAC,CACF,CADF,CADH
0110 C      COMMON CADS,CAEAF,CAHSAF,CAHSTS,CAIF

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0111      COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0112      COMMON CSTRF,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0113      COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0114      C
0115      INTEGER EXIT,CLMA,GDES,GWHY,OVRD,SBSL
0116      INTEGER SCEC,SWHY,TPSL,UGTA,ANIM
0117      INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0118      INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0119      INTEGER VEGETA,ANIMAL
0120      INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0121      INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0122      INTEGER RCLTEC,TTL
0123      C
0124      INTEGER COMMON (1)
0125      EQUIVALENCE (COMMON (1), ITEK (1))
0126      EQUIVALENCE (IARY (1), LUT)
0127      EQUIVALENCE (IARY2 (1), ISTRK)
0128      EQUIVALENCE (IARY2 (2), ISECT)
0129      EQUIVALENCE (IARY2 (3), ICODE)
0130      EQUIVALENCE (IARY2 (4), LEN)
0131      C
0132      LOGICAL LER
0133      C
0134      DIMENSION XWIH (10), RBOE (10), ADECD (10)
0135      C
0136      C      FIRST, DETERMINE THE ANGLES DEFINED BY THE CURRENT DATA
0137      C
0138      DO 10 I = 1, NHBP (LUO)
0139      10 XWIH (I) = HWHT (LUO, I) / TAN (HWSLI (LUO, I) * .01745)
0140      RBOE (1) = BENWI (LUO, 1)
0141      IF (NHBP (LUO) .EQ. 1) GOTO 40
0142      DO 20 I = 2, NHBP (LUO)
0143      20 RBOE (I) = RBOE (I) + XWIH (I) + BENWI (LUO, I)
0144      DO 30 I = 2, NHBP (LUO)
0145      30 RBOE (I) = RBOE (I - 1) - BENWI (LUO, I - 1) - XWIH (I)
0146      40 IF (IPTR .EQ. 3) GOTO 300
0147      DO 50 I = 1, NHBP (LUO)
0148      50 ADECD (I) = BENLEN (LUO, I) / RBOE (I)
0149      GOTO (100, 100, 900, 400, 500) IPTR
0150      C
0151      C      ADJUSTMENTS ARE BASED ON BENCH WIDTH CHANGES
0152      C
0153      100 I = ICHB
0154      RBOE (I) = RBOE (I) + PARAM1 - BENWI (LUO, I)
0155      IF (IPTR .EQ. 2) 105, 110
0156      105 RBOE (I - 1) = RBOE (I) + XWIH (I) + PARAM2
0157      I = I - 1
0158      110 I = I - 1
0159      IF (I .EQ. 0) GOTO 600
0160      RBOE (I) = RBOE (I + 1) + XWIH (I + 1) + BENWI (LUO, I)
0161      GOTO 110
0162      C
0163      C      TEST FOR MAXIMUM & MINIMUM BENCH LENGTHS
0164      C
0165      300 DO 310 I = 1, NHBP (LUO)
0166      BLMAX = RBOE (I) * 6.28319

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0167      IF (BENLEN (LUO, I) .LE. BLMAX) 310, 305
0168 305 WRITE (LUT, 1000) I, BENLEN (LUO, I)
0169      BENLEN (LUO, I) = BLMAX
0170      WRITE (LUT, 1010) BENLEN (LUO, I)
0171      IPTR = 0
0172 310 CONTINUE
0173      IF (NHBP (LUO) .EQ. 1) GOTO 900
0174      I = NHBP (LUO) - 1
0175 311 CMA = BENLEN (LUO, I+1) / RBOE (1 + 1)
0176      BLMIN = RBOE (I) * CMA
0177      IF (BENLEN (LUO, I) .LT. BLMIN ) 315, 320
0178 315 WRITE (LUT, 1000) I, BENLEN (LUO, I)
0179      BENLEN (LUO, I) = BLMIN
0180      WRITE (LUT, 1010) BENLEN (LUO, I)
0181      IPTR = 0
0182 320 I = I - 1
0183      IF (I .EQ. 0) 900, 311
0184 C
0185 C      ADJUSTMENTS BASED ON CHANGE IN HIGHWALL HEIGHT
0186 C
0187 400 I = ICHB
0188      XWIH (I) = PARAM1 / TAN (HWSL1 (LUO, I) * .01745)
0189      GOTO 110
0190 C
0191 C      ADJUSTMENTS BASED ON CHANGE IN INITIAL HIGHWALL SLOPE
0192 C
0193 500 I = ICHB
0194      XWIH (I) = HWHT (LUO, I) / TAN (PARAM1 * .01745)
0195      GOTO 110
0196 C
0197 C      MAKE THE ADJUSTMENTS
0198 C
0199 600 ICHB1 = ICHB
0200      IF (IPTR .EQ. 4 .OR. IPTR .EQ. 5) ICHB1 = ICHB - 1
0201      IF (LER) CALL ERASE
0202      IF (LER) CALL HOME
0203      DO 610 I = 1, ICHB1
0204          WRITE (LUT, 1000) I, BENLEN (LUO, I)
0205          BENLEN (LUO, I) = RBOE (I) * ADECD (I)
0206 610 WRITE (LUT, 1010) BENLEN (LUO, I)
0207 C
0208 C      DONE
0209 C
0210 900 IF (.NOT. LER) RETURN
0211      WRITE (LUT, 1020)
0212      CALL BELL
0213      CALL TINPT (ICHAR)
0214      CALL ERASE
0215      RETURN
0216 C
0217 C      FORMAT STATEMENTS
0218 C
0219 1000 FORMAT (/ , 5X "BENCH LENGTH "I2" 'S VALUE OF "F13.3" FEET")
0220 C
0221 1010 FORMAT (5X "HAS BEEN ADJUSTED TO "F13.3" FEET")
0222 C

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0223 1020 FORMAT (/,'5X'HIT THE RETURN KEY TO CONTINUE .....')  
0224 C  
0225 END  
0226 END\$

2TSDBR T=00004 IS ON CR00015 USING 00011 BLKS R=0000

```
0001  FTN4
0002      SUBROUTINE TSDBR (HEIGHT,SLINI,SLFIN,BR)
0003  C --- TRUCK AND SHOVEL : DETERMINE BENCH REMOVED ---
0004  C
0005  C LEVEL 5
0006  C
0007  C      THIS ROUTINE RETURNS THE BENCH REMOVED BY GRADING FROM
0008  C      THE INITIAL SLOPE TO THE FINAL SLOPE.
0009  C
0010  C CALLING SEQUENCE:
0011  C
0012  C      CALL TSDBR (HEIGHT,SLINI,SLFIN,BR)
0013  C
0014  C WHERE
0015  C
0016  C      HEIGHT -> HIGHWALL HEIGHT
0017  C      SLINI  -> INITIAL HIGHWALL SLOPE
0018  C      SLFIN  -> FINAL HIGHWALL SLOPE
0019  C      BR     -> BENCH REMOVED
0020  C
0021  C LOCAL VARIABLES:
0022  C
0023  C      ADJ1  -> X-SECTIONAL WIDTH OF HIGHWALL BASED ON INITIAL SLOPE
0024  C      ADJ2  -> X-SECTIONAL WIDTH OF HIGHWALL BASED ON FINAL SLOPE
0025  C      RSLFIN -> FINAL SLOPE IN RADIANS
0026  C      RSLINI -> INITIAL SLOPE IN RADIANS
0027  C
0028  C THIS ROUTINE WAS WRITTEN BY EASTMAN
0029  C
0030  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0031  C
0032  C =====
0033  C
0034  C
0035  C      CONVERT SLINI AND SLFIN TO RADIANS
0036  C
0037  C      RSLINI = SLINI * .01745
0038  C      RSLFIN = SLFIN * .01745
0039  C
0040  C      DETERMINE ADJ1 AND ADJ2
0041  C
0042  C      ADJ1 = (HEIGHT / 2.) / TAN(RSLINI)
0043  C      ADJ2 = (HEIGHT / 2.) / TAN(RSLFIN)
0044  C
0045  C      NOW CALCULATE BR
0046  C
0047  C      BR = ADJ2 - ADJ1
0048  C      IF(SLINI.EQ.SLFIN) BR = 0.
0049  C      RETURN
0050  C      END.
0051  END$
```

8TSGE T=00004 IS ON CR00015 USING 00044 BLKS R=0000

```
0001 FTN4
0002 SUBROUTINE TSGE
0003 C ---TRUCK AND SHOVEL GRADING EXECUTIVE---
0004 C
0005 C LEVEL 2
0006 C
0007 C TSGE IS THE TRUCK AND SHOVEL GRADING EXECUTIVE. INPUTS AND
0008 C EDITS TO BOTH THE INITIAL HIGHWALL/BENCH DESCRIPTION AND THE
0009 C GRADED TOPOGRAPHY ARE REPEATEDLY OFFERRED TO THE USER. AT
0010 C USER REQUEST, CROSS-SECTIONAL VIEWS OF THE CURRENT HIGHWALL/
0011 C BENCH PAIR WILL BE DISPLAYED DURING INPUT OF FINAL SLOPES.
0012 C SUMMARY DATA COMPRISING VOLUMES AND COSTS FOR GRADING EACH
0013 C HIGHWALL / BENCH PAIR AND GRAND TOTAL COSTS ARE AVAILABLE
0014 C ON THE TERMINAL, LINE PRINTER, OR CALCOMP PLOTTER,
0015 C DEPENDING ON USER PREFERENCE.
0016 C
0017 C TSGE IS ACCESSED BY GDE AND CLAIM, AND SWAPPED IN BY PROGRAM TSGEX
0018 C
0019 C THE CALLING SEQUENCE IS :
0020 C
0021 C CALL TSGE
0022 C
0023 C TSGE SCHEDULES THE SUBROUTINES :
0024 C
0025 C TSIFG TO INPUT FINAL SLOPES IN THE "GRAPHIC" MODE
0026 C TSIFN TO INPUT FINAL SLOPES IN THE "NON-GRAPHIC" MODE
0027 C TSIHB TO INPUT THE INITIAL HIGHWALL / BENCH DATA
0028 C TSRIE TO INPUT REHANDLE DATA
0029 C TSSCF TO SCHEDULE SELECTIVE CHANGES TO FINAL SLOPES
0030 C TSSCI TO SCHEDULE SELECTIVE CHANGES TO INITIAL DATA
0031 C TSST TO PRINT A SUMMARY TABLE
0032 C TSXST TO PRESENT A SUMMARY TABLE WITH CROSS-SECTION OF SPOILS
0033 C
0034 C TSGE USES THE TCS ROUTINES ERASE AND HOME
0035 C AND DECLARES LABEL COMMON ALTRN
0036 C
0037 C THE LOCAL VARIABLES ARE :
0038 C
0039 C IANS - ANSWER CELL
0040 C IPTR - POINTER TO EDIT OPTION
0041 C
0042 C THIS ROUTINE WAS WRITTEN BY GREEN
0043 C (PATTERNED AFTER "GRADE" BY EASTMAN)
0044 C
0045 C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0046 C =====
0047 C
0048 C TEKTRONIX COMMON
0049 C
0050 C COMMON ITEK (45)
0051 C
0052 C LOGICAL UNITS AND COMMON LOCATION
0053 C
0054 C COMMON IARRY(5),IARY2(5),LER,LUF,LUL
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0055 C
0056 C   POINTERS
0057 C
0058     COMMON EXIT      ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0059     COMMON IOPTN     ,IOVR(7),IHB      ,ISOC(6),ISUB(8)
0060     COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT  ,LUO
0061     COMMON MODE      ,NANM      ,NCLI      ,NGEN      ,NGRW
0062     COMMON NOVR      ,NSECTS    ,NSOC      ,NSUB      ,NSUR
0063     COMMON NTOP      ,NU        ,NVEG
0064 C
0065 C   GRADING PARAMETERS
0066 C
0067     COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCPA(5)
0068     COMMON SPCC(5),HWHT(5,10),HWSLI(5,10),NHBF(5),PCEQ19(4)
0069     COMMON BENWF(5,10),REHCPY(5),REHVOL(5),HWSLF(5,10),USR
0070 C
0071 C   CATEGORY TEXT
0072 C
0073     COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0074     COMMON OVRD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0075     COMMON TPSL(49,13),VGTA(15,13)
0076 C
0077 C   EXPECTATION VALUES
0078 C
0079     COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0080     COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0081     COMMON TOPSOI(33,6),VEGETA(10,6)
0082 C
0083 C   CATEGORY RESPONSES
0084 C
0085     COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0086     COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0087     COMMON RTOPSO(9),RVEGET(2)
0088 C
0089 C   FEASI,TECON,OFUSE SUBSYSTEM PARAMETERS
0090 C
0091     COMMON CAAHM,CABAH,CABFN(3),CABFF(3),CABHM
0092     COMMON CABS(2),CAC,CACP,CADF,CADH
0093     COMMON CADS,CAEAF,CAHSAF,CAHSTS,CAIF
0094     COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0095     COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0096     COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0097 C
0098     INTEGER EXIT,CLMA,GDES,GWHY,OVRD,SBSL
0099     INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0100     INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0101     INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0102     INTEGER VEGETA,ANIMAL
0103     INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0104     INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0105     INTEGER RCLTEC,TTL
0106 C
0107     INTEGER COMMON (1)
0108     EQUIVALENCE (COMMON (1), ITEK (1))
0109     EQUIVALENCE (IARY (1), LUT)
0110     EQUIVALENCE (IARY2 (1), ISTRK)

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0111      EQUIVALENCE (IARY2 (2), ISECT)
0112      EQUIVALENCE (IARY2 (3), ICODE)
0113      EQUIVALENCE (IARY2 (4), LEN)
0114      C
0115      LOGICAL LER
0116      C
0117      C
0118      COMMON / ALTRN / ALTN
0119      INTEGER ALTN (6,4)
0120      C
0121      C          TEST MODE
0122      IF (MODE .EQ. 1 .OR. MODE .EQ. 4) 100, 500
0123      C          INPUT REHANDLE DATA FOR MINE RUN AND FINAL CUT OPTION
0124      100      IF (RGENDE (2) .EQ. 1) GOTO 200
0125      IOPTN = 1
0126      110      CALL TSRIE
0127      GOTO (200, 500) IOPTN
0128      C          INPUT INITIAL HIGHWALL / BENCH DATA
0129      200      IF (LER) CALL ERASE
0130      IF (LER) CALL HOME
0131      IF (MODE .EQ. 4) GOTO 209
0132      C          OFFER THE USER THE OPTION OF USING INITIAL DATA
0133      C          ENTERED FOR THE PREVIOUSLY DESCRIBED ALTERNATIVE -
0134      C          IF LUO > 1
0135      WRITE (LUT, 7000) (ALTN (LUO, J), J = 1, 4)
0136      IF (LUO .EQ. 1) GOTO 209
0137      IF (NHBP (LUO - 1) .EQ. 0) GOTO 209
0138      WRITE (LUT, 1015) (ALTN (LUO - 1, J), J = 1, 4)
0139      READ (LUT, 7900) IANS
0140      IF (IANS .NE. 2HYE) GOTO 209
0141      C          SET INITIAL DATA TO PREVIOUSLY DESCRIBED DATA
0142      DO 205 I = 1, NHBP (LUO - 1)
0143      HWSLI (LUO, I) = HWSLI (LUO - 1, I)
0144      HWHT (LUO, I) = HWHT (LUO - 1, I)
0145      BENWI (LUO, I) = BENWI (LUO - 1, I)
0146      205      BENLEN (LUO, I) = BENLEN (LUO - 1, I)
0147      NHBP (LUO) = NHBP (LUO - 1)
0148      SPCC (LUO) = SPCC (LUO - 1)
0149      GOTO 300
0150      209      IOPTN = 1
0151      210      CALL TSIHB
0152      IF (NHBP (LUO) .EQ. 0) RETURN
0153      IF (IOPTN .EQ. 2) GOTO 500
0154      C          INPUT FINAL SLOPES : IPTR = 1 -> GRAPHIC MODE
0155      C          IPTR = 2 -> NON-GRAPHIC MODE
0156      300      IF (.NOT. LER) GOTO 350
0157      CALL ERASE
0158      CALL HOME
0159      WRITE (LUT, 3000)
0160      310      READ (LUT, *) IPTR
0161      IF (IPTR .GE. 1 .AND. IPTR .LE. 2) GOTO (330, 350) IPTR
0162      WRITE (LUT, 1000)
0163      GOTO 310
0164      C          GRAPHIC MODE
0165      330      CALL TSIFG
0166      IF (LER) CALL ERASE

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0167          IF (LER) CALL HOME
0168          IF (IHB .EQ. 0) GOTO 500
0169          GOTO 500
0170 C          NON - GRAPHIC MODE
0171 350 CALL TSIFN
0172          IF (IHB .EQ. 0) GOTO 500
0173 C          USER SELECTION -> EDIT OPTION
0174 500      IF (LER) CALL ERASE
0175          IF (LER) CALL HOME
0176          WRITE (LUT, 5000)
0177 510 READ (LUT, *) IPTR
0178          IF (IPTR .GE. 0 .AND. IPTR .LE. 8)
0179      > GOTO (800, 750, 550, 515, 600, 700, 200, 300, 511)
0180      > IPTR + 1
0181          WRITE (LUT, 1000)
0182          GOTO 510
0183 C          EDIT THE COST OF GRADING OVERBURDEN, AND RE-COMPUTE
0184 C          GRADING COSTS FOR ALL ALTERNATIVES CURRENTLY DEFINED
0185 511 WRITE (LUT, 7901) COGO
0186 512 READ (LUT, * ) COGO
0187          IF (COGO .GE. 0) GOTO 513
0188          WRITE (LUT, 1000)
0189          GOTO 512
0190 513      IF (MODE .EQ. 4) GOTO 500
0191          IOPTN = 2
0192          LUOTMP = LUO
0193          DO 514 LUO = 1, LUOTMP
0194          CALL TSST
0195 514 CONTINUE
0196          LUO = LUOTMP
0197          GOTO 500
0198 C          EDIT SPOIL PILE CONFIGURATION CODE
0199 515 IOPTN = 2
0200          GOTO 210
0201 C          EDIT REHANDLE DATA
0202 550      IF (RGENDE (2) .EQ. 1) GOTO 500
0203          IOPTN = 2
0204          GOTO 110
0205 C          SELECTIVE CHANGES TO INITIAL HIGHWALL / BENCH DATA
0206 600 CALL TSSCI
0207          GOTO 500
0208 C          SELECTIVE CHANGES TO FINAL SLOPE VALUES
0209 700 CALL TSSCF
0210          GOTO 500
0211 C          DISPLAY SUMMARY TABLE
0212 750      IF (.NOT. LER) GOTO 780
0213          CALL ERASE
0214          CALL HOME
0215          WRITE (LUT, 7500)
0216 760 READ (LUT, *) IPTR
0217          IF (IPTR .GE. 1 .AND. IPTR .LE. 2 ) GOTO (770, 780) IPTR
0218          WRITE (LUT, 1000)
0219          GOTO 760
0220 C          SUMMARY TABLE WITH X-SECTIONAL DISPLAY
0221 770 CALL TSXST
0222          GOTO 500

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0223 C          SUMMARY TABLE WITHOUT X-SECTIONAL DISPLAY
0224 780 WRITE (LUT, 7800)
0225 790 READ (LUT, 7900) IANS
0226 IF (IANS .EQ. 2HTT .OR. IANS .EQ. 2HLP) GOTO 795
0227 WRITE (LUT, 1000)
0228 GOTO 790
0229 795 IF (IANS .EQ. 2HLP) LUL = 6
0230 IF (IANS .EQ. 2HTT) LUL = LUT
0231 IOPTN = 1
0232 CALL TSST
0233 GOTO 500
0234 C ** DONE ** UPDATE INFORMATION AND RETURN
0235 800 IF (MODE .EQ. 4) GOTO 900
0236 IOPTN = 2
0237 CALL TSST
0238 900 RETURN
0239 C          FORMAT STATEMENTS:
0240 1000 FORMAT (5X'?? ERROR . RE-INPUT YOUR VALUE -> _')
0241 C
0242 1015 FORMAT (/5X'USE SAME INITIAL DATA AS FOR "4A2" ? _')
0243 C
0244 3000 FORMAT (/5X' READY TO INPUT FINAL SLOPES.'/
0245 > 5X' 1 -> GRAPHIC MODE'//,
0246 > 5X' 2 -> NON - GRAPHIC MODE'//,
0247 > 5X' ENTER YOUR SELECTION -> _')
0248 C
0249 5000 FORMAT (5X' *** EDIT OPTIONS ***'//
0250 > 5X' 0 -> EXIT FROM THIS LAND USE OPTION'//
0251 > 5X' 1 -> DISPLAY SUMMARY TABLE OF VOLUME AND COST*1X
0252 + 'CALCULATIONS'//
0253 > 5X' 2 -> EDIT REHANDLE DATA L NOT FOR OPENING CUT J'//
0254 > 5X' 3 -> EDIT THE SPOIL FILE CONFIGURATION CODE'//
0255 > 5X' 4 -> SCHEDULE SELECTIVE CHANGES TO INITIAL'/
0256 > 5X' HIGHWALL / BENCH DATA'//
0257 > 5X' 5 -> SCHEDULE SELECTIVE CHANGES TO FINAL SLOPES'//
0258 > 5X' 6 -> RE - INPUT ALL INITIAL HIGHWALL / BENCH DATA'//
0259 > 5X' 7 -> RE - INPUT ALL FINAL SLOPE VALUES'//
0260 > 5X' 8 -> EDIT THE COST OF GRADING OVERBURDEN'/
0261 > 5X' AND RE-COMPUTE ALL COSTS FOR ALL LAND'/
0262 > 5X' USE OPTIONS CURRENTLY DESCRIBED'//
0263 > 5X' ENTER YOUR SELECTION -> _')
0264 C
0265 7000 FORMAT(/5X'** TRUCK AND SHOVEL SEGMENT - "4A2" ALTERNATIVE **')
0266 7500 FORMAT (5X' ** DISPLAY SUMMARY TABLE **'//
0267 > 5X' 1 -> PRESENT CROSS - SECTIONAL VIEW OF GRADED'/
0268 > 5X' SPOILS WITH SUMMARY TABLE'//
0269 > 5X' 2 -> PRESENT SUMMARY TABLE ONLY '//
0270 > 5X' ENTER YOUR SELECTION -> _')
0271 C
0272 7800 FORMAT (5X' DISPLAY ON TERMINAL (TT) OR LINE PRINTER (LP) ? _')
0273 C
0274 7900 FORMAT (A2)
0275 C
0276 7901 FORMAT (5X'CURRENT COST OF GRADING SPOILS IS ->'F5.2,1X,
0277 > 'CENTS/CUBIC YD.'//,
0278 > 'ENTER THE NEW COST FOR GRADING SPOILS -> _')

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0279 C  
0280 END  
0281 ENL\$

&TSIFG T=00004 IS ON CRO0015 USING 00066 BLKS R=0000

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0001  FTN4
0002                SUBROUTINE TSIFG
0003  C      ---TRUCK AND SHOVEL : INPUT FINAL SLOPES - GRAPHIC MODE---
0004  C
0005  C LEVEL 3
0006  C
0007  C      FINAL SLOPES DESIRED ON THE HIGHWALLS ARE ENTERED. CROSS-
0008  C      SECTIONAL DISPLAYS OF THE MINIMUM SLOPE REQUEST, SUGGESTED
0009  C      BENCH ADJUSTMENTS TO ACCOMMODATE A USER'S SLOPE REQUEST, AND
0010  C      THE FINAL SLOPE VALUE ARE DISPLAYED.
0011  C
0012  C TSIFG IS ACCESSED BY TSGE AND SWAPPED IN BY PROGRAM TSIFX
0013  C
0014  C THE CALLING SEQUENCE IS : CALL TSIFG
0015  C
0016  C TSIFG SCHEDULES THE SUBROUTINES :
0017  C
0018  C      ANMOD (TCS)
0019  C      BELL  (TCS)
0020  C      DASHA (TCS)
0021  C      DRAWA (TCS)
0022  C      DRWRL (TCS)
0023  C      ERASE (TCS)
0024  C      HOME  (TCS)
0025  C      INITT (TCS)
0026  C      IOWAT (TCS)
0027  C      MOVAB (TCS)
0028  C      MOVEA (TCS)
0029  C      MOVRL (TCS)
0030  C      SWNDO (TCS)
0031  C      VWNDO (TCS)
0032  C      SPOLU (SYS)
0033  C      DVN   (CLAIM)
0034  C      TSDBR (CLAIM)
0035  C      TSSCK (CLAIM)
0036  C      TSXBA (CLAIM)
0037  C      TSXFS (CLAIM)
0038  C
0039  C TSIFG ACCESSES THE DATA FILE : TSRFS
0040  C
0041  C THE LOCAL VARIABLES ARE :
0042  C
0043  C      BENR    -> BENCH REMOVED
0044  C      CDTR    -> CONVERSION: DEGREES TO RADIANS
0045  C      FMT (INTEGER) -> MASTER FORMAT ARRAY
0046  C      FMT1 (INTEGER) -> FORMAT ARRAY FOR CURRENT LUO
0047  C      IOC    -> ORIENTATION CODE (SEE DVN)
0048  C      ISC    -> SIZE CODE (SEE DVN)
0049  C      LBN    -> LIMITING BENCH NUMBER
0050  C      NDP    -> NUMBER OF DECIMAL PLACES (SEE DVN)
0051  C      RFS (INTEGER) -> RECOMMENDED FINAL SLOPES (INTIAL)
0052  C      SLMAX  -> MAXIMUM REQUESTABLE SLOPE
0053  C      SLMIN  -> MINIMUM REQUESTABLE SLOPE
0054  C      SLMINA -> MINIMUM REQUESTABLE SLOPE BASED ON BENCH ABOVE
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0055 C      SLMINB  -> MINIMUM REQUESTABLE SLOPE BASED ON BENCH BELOW
0056 C      TSRFS   -> ID SEGMENT FOR FILE
0057 C      WBB     -> WIDTH OF BENCH BELOW
0058 C      XEXT     -> X EXTENT
0059 C      XSWFH    -> CROSS-SECTIONAL WIDTH OF FINAL HIGHWALL
0060 C      XSWIH    -> CROSS-SECTIONAL WIDTH OF INITIAL HIGHWALL
0061 C
0062 C THIS ROUTINE WAS WRITTEN BY GREEN
0063 C
0064 C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0065 C =====
0066 C
0067 C      TEKTRONIX COMMON
0068 C
0069 C      COMMON ITEK (45)
0070 C
0071 C      LOGICAL UNITS AND COMMON LOCATION
0072 C
0073 C      COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0074 C
0075 C      POINTERS
0076 C
0077 C      COMMON EXIT      ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0078 C      COMMON IOPTN     ,IOVR(7),IHB      ,ISOC(6),ISUB(8)
0079 C      COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT  ,LUO
0080 C      COMMON MODE      ,NANM      ,NCLI      ,NGEN      ,NGRW
0081 C      COMMON NOVR      ,NSECTS    ,NSOC      ,NSUB      ,NSUR
0082 C      COMMON NTOP      ,NU        ,NVEG
0083 C
0084 C      GRADING PARAMETERS
0085 C
0086 C      COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCPA(5)
0087 C      COMMON SPCC(5),HWHT(5,10),HWSLI(5,10),NHRF(5),FCEQ19(4)
0088 C      COMMON BENWF(5,10),REHCPY(5),REHVOL(5),HWSLF(5,10),USR
0089 C
0090 C      CATEGORY TEXT
0091 C
0092 C      COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0093 C      COMMON OVRD(11,13),SBSL(13), SCEC(33,13),SWHY(44,13)
0094 C      COMMON TPST(49,13),VGTA(15,13)
0095 C
0096 C      EXPECTATION VALUES
0097 C
0098 C      COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0099 C      COMMON OVRDND(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0100 C      COMMON TOPSOI(33,6),VEGETA(10,6)
0101 C
0102 C      CATEGORY RESPONSES
0103 C
0104 C      COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0105 C      COMMON ROVRDND(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0106 C      COMMON RTOPSO(9),RVEGET(2)
0107 C
0108 C      FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0109 C
0110 C      COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHM

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0111      COMMON CABS(2),CAC,CACF,CADF,CADH
0112      COMMON CADS,CAEAF,CAHSAP,CAHSTS,CAIP
0113      COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0114      COMMON CSTRP,FAVG(5),FFSTSP,PFAC,RCLTEC(29,34)
0115      COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0116  C
0117      INTEGER EXIT,CLMA,GDES,GWHY,OVRD,SBSL
0118      INTEGER SCEC,SWHY,TPSL,UGTA,ANIM
0119      INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0120      INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0121      INTEGER VEGETA,ANIMAL
0122      INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0123      INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0124      INTEGER RCLTEC,TTL
0125  C
0126      INTEGER COMMON (1)
0127      EQUIVALENCE (COMMON (1), ITEK (1))
0128      EQUIVALENCE (IARRY (1), LUT)
0129      EQUIVALENCE (IARY2 (1), ISTRK)
0130      EQUIVALENCE (IARY2 (2), ISECT)
0131      EQUIVALENCE (IARY2 (3), ICODE)
0132      EQUIVALENCE (IARY2 (4), LEN)
0133  C
0134      LOGICAL LER
0135  C
0136  C
0137      COMMON /ALTRN/ ALTN
0138  C
0139      DIMENSION RFS (10)
0140      INTEGER ALTN(6,4),FMT(5,6),TSRFS(3),FMT1(6)
0141  C
0142      DATA FMT/2H(1,2H(1,2H(2,2H(3,2H(4,2HOF,2H/, ,2H/, ,2H/, ,2H/, ,
0143      * 2H5.,2H10,2H10,2H10,2H10,2H1),2HF5,2HF5,2HF5,2HF5,2H ,
0144      * 2H.1,2H.1,2H.1,2H.1,2H ,2H) ,2H) ,2H) ,2H) /
0145  C
0146      DATA TSRFS/2HTS,2HRF,2HS /
0147      DATA ICR/15/
0148  C
0149  C      INITIALIZE LOCAL VARIABLES
0150  C
0151      SLMAX = 19.
0152      IF (LUD .EQ. 1) SLMAX = 5.7
0153      CDTR = 0.01745
0154      ISC = 4
0155      IOC = 3
0156      NDF = 2
0157      IF (MODE .EQ. 4) GOTO 7
0158  C
0159  C      READ IN THE RECOMMENDED FINAL SLOPE VALUES
0160  C
0161      CALL SPOLU(LUF,TSRFS,2,1,ICR)
0162      IF (LUF .LT. 0) STOP
0163      DO 5 JJ = 1, 6
0164      5 FMT1(JJ) = FMT(LUD,JJ)
0165      READ(LUF,FMT1) (RFS(J), J = 1, NHRF (LUD) )
0166      CALL SPOLU(LUF,TSRFS,2,2,ICR)

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0167 C
0168 C      INITIALIZE THE SCREEN, THEN PRINT ROUTINE TITLE
0169 C
0170 7 CALL INITT (LUT)
0171      CALL IOWAT (45)
0172      IF (MODE .NE. 4)
0173 >WRITE (LUT, 1000) (ALTN (LUO, J), J = 1, 4)
0174      IF (MODE .EQ. 4) WRITE (LUT, 1005)
0175 C
0176 C      INITIATE LOOP
0177 C
0178 10 IHB = 1
0179      SLMINB = 1.
0180      GOTO 20
0181 C
0182 C      DETERMINE THE MINIMUM REQUESTABLE SLOPE BASED ON BENCH "IHB-1"
0183 C
0184 15 CALL TSSCK (BENWF (LUO, IHB - 1), HWSLI (LUO, IHB),
0185      .          HWHT (LUO, IHB), SLMINB)
0186 C
0187 C      DETERMINE THE MINIMUM REQUESTABLE SLOPE BASED ON BENCH "IHB"
0188 C
0189 20 CALL TSSCK (BENWI (LUO, IHB), HWSLI (LUO, IHB),
0190      .          HWHT (LUO, IHB), SLMINA)
0191 C
0192 C      DETERMINE THE MINIMUM REQUESTABLE SLOPE
0193 C
0194      SLMIN = AMAX1 (SLMINA, SLMINB)
0195 C
0196 C      DETERMINE THE LIMITING BENCH NUMBER
0197 C
0198      LBN = IHB
0199      IF (SLMINA .LT. SLMINB) LBN = IHB - 1
0200 C
0201 C      SET THE WINDOWS
0202 C
0203      IF (IHB .EQ. 1) WEBB = BENWI (LUO, IHB)
0204      IF (IHB .GT. 1) WEBB = BENWF (LUO, IHB - 1)
0205      XSWIH = HWHT (LUO, IHB) / TAN (HWSLI (LUO, IHB) * CDTR)
0206      XEXT = WEBB + XSWIH + BENWI (LUO, IHB)
0207      XSWFH = HWHT (LUO, IHB) / TAN (SLMIN * CDTR)
0208      CALL VWNDO (0., XEXT, -20., XEXT / 5.)
0209 C
0210      IF (HWHT (LUO, IHB) + 30. .GE. XEXT / 5.)
0211 >CALL VWNDO (0., XEXT, -20., HWHT (LUO, IHB) + 30.)
0212 C
0213      CALL SWNDO (10, 440, 500, 220)
0214 C
0215      CALL MOVAB (10, 730)
0216      CALL ANMOD
0217      WRITE (LUT, 1010)
0218      CALL MOVEA (0., 0.)
0219 C
0220 C      DRAW THE INITIAL DATA
0221 C
0222      CALL DRAWA (WEBB, 0.)

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0223      CALL DRAWA (WBB + XSWIH, HWHT (LUO, IHB))
0224      CALL DRAWA (XEXT, HWHT (LUO, IHB))
0225      CALL DASHA (XEXT, 0., 54)
0226      CALL DASHA (WBB, 0., 54)
0227      C
0228      C      DRAW THE MINIMUM REQUESTABLE SLOPE
0229      C
0230      IF (LBN .EQ. IHB) 60, 50
0231      50 CALL MOVEA (0., 0.)
0232      CALL DASHA (XSWFH, HWHT (LUO, IHB), 54)
0233      CALL MOVEA (0., 0.)
0234      GOTO 75
0235      C
0236      60 CALL MOVEA (XEXT, HWHT (LUO, IHB))
0237      CALL DASHA (XEXT - XSWFH, 0., 54)
0238      C
0239      C      LABEL THE MINIMUM SLOPE REQUEST
0240      C
0241      75 CALL MOVRL (40, 0)
0242      CALL DRWRL (0, 50)
0243      CALL DVN (SLMIN, ISC, IOC, NDP)
0244      CALL MOVRL (-3, 0)
0245      CALL DRWRL (0, 3)
0246      CALL DRWRL (3, 0)
0247      CALL DRWRL (0, -3)
0248      CALL DRWRL (-3, 0)
0249      C
0250      C      LABEL THE UPPER BENCH WIDTH
0251      C
0252      CALL MOVEA (WBB + XSWIH, HWHT (LUO, IHB))
0253      IF (BENWI (LUO, IHB) .LT. XEXT / 3.) 80, 90
0254      C
0255      80 CALL MOVEA (XEXT - (BENWI (LUO, IHB) / 2.), HWHT (LUO, IHB) )
0256      CALL DRWRL (6, 6)
0257      CALL MOVRL (-6, -6)
0258      CALL DRWRL (-6, 6)
0259      CALL MOVRL (6, -6)
0260      CALL DRWRL (0, 15)
0261      CALL MOVRL (-15, 10)
0262      IOC = 1
0263      CALL DVN (BENWI (LUO, IHB), ISC, IOC, NDP)
0264      GOTO 100
0265      C
0266      90 CALL DRAWA (WBB + XSWIH, HWHT (LUO, IHB) + 10.)
0267      CALL MOVEA (WBB + XSWIH, HWHT (LUO, IHB) + 5.)
0268      CALL DRAWA (WBB + XSWIH + BENWI (LUO, IHB) / 3.,
0269      ,      HWHT (LUO, IHB) + 5.)
0270      IOC = 1
0271      CALL DVN (BENWI (LUO, IHB), ISC, IOC, NDP)
0272      CALL DRAWA (XEXT, HWHT (LUO, IHB) + 5.)
0273      CALL MOVEA (XEXT, HWHT (LUO, IHB) + 10.)
0274      CALL DRAWA (XEXT, HWHT (LUO, IHB))
0275      C
0276      C      LABEL THE LOWER TERRACE WIDTH
0277      C
0278      100 CALL MOVEA (0., 0.)

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0279      CALL DRAWA (0., -20.)
0280      IF (WEB .LT. XEXT / 3.) 110, 120
0281  C
0282      110 CALL MOVEA (WEB / 2., 0.)
0283      CALL DRWRL (-6, -6)
0284      CALL MOVRL (6, 6)
0285      CALL DRWRL (6, -6)
0286      CALL MOVRL (-6, 6)
0287      CALL DRAWA (WEB / 2., -5.)
0288      CALL DRWRL (10, 0)
0289      CALL DVN (WEB, ISC, IOC, NDP)
0290      CALL MOVEA (WEB, 0.)
0291      GOTO 130
0292  C
0293      120 CALL MOVEA (0., -5.)
0294      CALL DRAWA (15., -5.)
0295      CALL DVN (WEB, ISC, IOC, NDP)
0296      CALL DRAWA (WEB, -5.)
0297      CALL MOVEA (WEB, -10.)
0298      CALL DRAWA (WEB, 0.)
0299  C
0300  C      LABEL THE INITIAL HIGHWALL SLOPE
0301  C
0302      130 CALL MOVRL (20, 10)
0303      CALL DVN (HWSLI (LUO, IHB), ISC, IOC, NDP)
0304      CALL MOVRL (0, 3)
0305      CALL DRWRL (0, 3)
0306      CALL DRWRL (3, 0)
0307      CALL DRWRL (0, -3)
0308      CALL DRWRL (-3, 0)
0309  C
0310  C      LABEL THE TOTAL X-SECTIONAL WIDTH AND HEIGHT
0311  C
0312      CALL MOVEA (0., -15.)
0313      CALL DRAWA (WEB + 10., -15.)
0314      CALL DVN (XEXT, ISC, IOC, NDP)
0315      CALL DRAWA (XEXT, -15.)
0316      CALL MOVEA (XEXT, -20.)
0317      CALL DRAWA (XEXT, 0.)
0318      CALL MOVEA (XEXT, HWHT (LUO, IHB) / 2.)
0319      CALL DRWRL (15, 0)
0320      CALL MOVRL (10, -20)
0321      IOC = 3
0322      CALL DVN (HWHT (LUO, IHB), ISC, IOC, NDP)
0323  C
0324  C      INPUT THE USER'S SLOPE REQUEST
0325  C
0326      CALL MOVAB (10, 400)
0327      CALL ANMOD
0328      WRITE (LUT, 1015) IHB
0329      CALL BELL
0330      IF (MODE .EQ. 4) GOTO 150
0331      WRITE (LUT, 1020) RFS (IHB)
0332      GOTO 160
0333      150 SLMAX = HWSLI (LUO, IHB)
0334      160 WRITE (LUT, 1030) SLMIN, LBN, SLMAX, IHB

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```

0335 C
0336 170 READ (LUT, *) USR
0337 C
0338 C TEST THIS SLOPE VALUE
0339 C
0340 IF (USR .GE. SLMIN) GOTO 200
0341 C
0342 C DRAW CROSS - SECTION OF SUGGESTED BENCH ADJUSTMENTS
0343 C
0344 CALL TSXBA
0345 C
0346 C START OVER OR QUIT
0347 C
0348 IF (IHB .EQ. 0) GOTO 600
0349 CALL ERASE
0350 CALL HOME
0351 IF (IHB .EQ. 1) 10, 15
0352 C
0353 C TEST USR FOR TOO GREAT A MAGNITUDE
0354 C
0355 200 IF (USR .LE. SLMAX) GOTO 210
0356 WRITE (LUT, 1040) SLMAX
0357 GOTO 170
0358 C
0359 C USER INPUT VALUE IS OK. UPDATE INFORMATION
0360 C
0361 210 HWSLF (LUO, IHB) = USR
0362 CALL TSDER (HWHT (LUO, IHB), HWSLI (LUO, IHB),
0363 HWSLF (LUO, IHB), BENR)
0364 IF (IHB .EQ. 1) GOTO 211
0365 BENWF (LUO, IHB - 1) = BENWF (LUO, IHB - 1) - BENR
0366 211 BENWF (LUO, IHB) = BENWI (LUO, IHB) - BENR
0367 C
0368 C DRAW X-SECTION OF GRADED SLOPE AND GET THE NEXT PAIR
0369 C
0370 CALL TSXFS
0371 IHB = IHB + 1
0372 IF (IHB .LE. NHRP (LUO)) GOTO 15
0373 RETURN
0374 C
0375 C USER WANTS OUT -> RESET FINAL DATA TO INITIAL DATA
0376 C
0377 600 DO 605 I = 1, NHRP (LUO)
0378 BENWF (LUO, I) = BENWI (LUO, I)
0379 605 HWSLF (LUO, I) = HWSLI (LUO, I)
0380 RETURN
0381 C
0382 C FORMAT STATEMENTS
0383 C
0384 1000 FORMAT(15X'INPUT FINAL SLOPES : '4A2' ALTERNATIVE')
0385 C
0386 1005 FORMAT(15X'INPUT FINAL SLOPES ')
0387 C
0388 C
0389 1010 FORMAT('MINIMUM REQUESTABLE SLOPE')
0390 C

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0391 1015 FORMAT(10X,20('-',),'HIGHWALL # 'I2,20('-','))
0392 C
0393 1020 FORMAT(/'WE RECOMMEND A FINAL SLOPE VALUE OF 'F7.2' DEGREES.')
```

0394 C

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0395 1030 FORMAT(
0396     >7X'THE CURRENT MINIMUM SLOPE OF 'F7.2' DEGREES WILL RESULT'/,
0397     >7X'IN A TERRACE # 'I2' WIDTH OF ABOUT ZERO.'/,
0398     >7X'THE MAXIMUM REQUESTABLE SLOPE IS -> 'F8.2' DEGREES'//
0399     .7X'INPUT THE FINAL SLOPE (DEGREES) DESIRED ON HIGHWALL 'I2' -> _')
```

0400 C

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0401 1040 FORMAT(F7.2'??ERROR : MAXIMUM SLOPE EXCEEDED. RE-INPUT -> _')
```

0402 C

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0403     END
0404 END$
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&TSIFN Y=00004 IS ON CR00015 USING 00070 BLKS R=0000

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0001  FTN4
0002                      SUBROUTINE TSIFN
0003  C      ---TRUCK AND SHOVEL : INPUT FINAL SLOPES (NON-GRAPHIC MODE)
0004  C
0005  C LEVEL 3
0006  C
0007  C TSIFN INPUTS FINAL SLOPES IN THE "NON-GRAPHIC" MODE - THAT IS, NO
0008  C CROSS-SECTIONAL VIEWS OF THE DATA ARE AVAILABLE. A TABLE OF
0009  C RECOMMENDED FINAL SLOPE VALUES ARE PRESENTED TO THE USER, WHO HAS
0010  C THE OPTION OF IMPLEMENTING THEM DIRECTLY, OR USING HIS OWN. SHOULD
0011  C A USER ENTERED OR RECOMMENDED FINAL SLOPE VALUE BE LESS THAN THE
0012  C MINIMUM REQUESTABLE FINAL SLOPE VALUE, THE USER IS GIVEN A
0013  C SUGGESTION DESCRIBING THE BENCH ADJUSTMENTS NEEDED TO IMPLEMENT
0014  C THAT SLOPE. IF THE USER EXITS BEFORE COMPLETING THE FINAL SLOPE
0015  C DESCRIPTION, THE FINAL SLOPES ARE SET TO THE INITIAL SLOPES. ALL
0016  C SLOPE VALUES ARE ADJUSTED TO THE "HUNDRETHS" PLACE.
0017  C
0018  C TSIFN IS ACCESSED BY TSIFG AND SWAPPED IN BY PROGRAM TSIFO
0019  C
0020  C THE CALLING SEQUENCE IS :    CALL TSIFN
0021  C
0022  C SUBROUTINES SCHEDULED:
0023  C
0024  C      ERASE      (TCS)
0025  C      HOME       (TCS)
0026  C      TSIBR      (CLAIM)
0027  C      TSRC       (CLAIM)
0028  C      TSSCK      (CLAIM)
0029  C      TSBLA      (CLAIM)
0030  C      SPOLU      (SYS)
0031  C
0032  C LABEL COMMON DECLARATIONS :
0033  C
0034  C      ALTRN
0035  C
0036  C LOCAL VARIABLES:
0037  C
0038  C      B1          -> USER DEFINED BENCH "1HB" WIDTH
0039  C      B2          -> USER DEFINED BENCH "1HB-1" WIDTH
0040  C      BENCH1      -> SUGGESTED BENCH "1HB-1" WIDTH
0041  C      BENCH2      -> SUGGESTED BENCH "1HB-1" WIDTH (TWO BENCH ADJUSTMEN
0042  C      BENR        -> BENCH REMOVED
0043  C      BMIN        -> MINIMUM BENCH WIDTH
0044  C      FMT         -> MASTER FORMAT ARRAY FOR FILE READ (INTEGER)
0045  C      FMT1        -> FORMAT STATEMENT FOR CURRENT LUO (INTEGER)
0046  C      IANS        -> ANSWER CELL
0047  C      IAVAL       -> FLAG FOR DEFAULT SLOPE AVAILABILITY
0048  C      IDFALT      -> SET TO 2 FOR INPUT OF DEFAULT SLOPES
0049  C      LBN         -> LIMITING BENCH NUMBER
0050  C      NMB         -> NUMBER OF BENCH NEEDING ADJUSTMENT (2 BENCHES)
0051  C      NUMBR       -> NUMBER OF BENCH NEEDING ADJUSTMENT (1 BENCH ONLY)
0052  C      SLMAX       -> MAXIMUM PERMISSIBLE FINAL SLOPE
0053  C      SLMIN       -> MINIMUM PERMISSIBLE FINAL SLOPE
0054  C      SLMINA      -> MINIMUM SLOPE BASED ON BENCH ABOVE CURRENT HIGHWAY
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0055 C      SLMINB -> MINIMUM SLOPE BASED ON BENCH BELOW CURRENT HIGHWALL
0056 C
0057 C DATA FILES ACCESSED :  TSRFS
0058 C
0059 C THIS ROUTINE WAS WRITTEN BY EASTMAN AND EXTENSIVELY MODIFIED BY GREEN.
0060 C
0061 C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0062 C
0063 C =====
0064 C
0065 C      TEKTRONIX COMMON
0066 C
0067 C      COMMON ITEK (45)
0068 C
0069 C      LOGICAL UNITS AND COMMON LOCATION
0070 C
0071 C      COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0072 C
0073 C      POINTERS
0074 C
0075 C      COMMON EXIT      ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0076 C      COMMON IOPTN     ,IOVR(7),IHR      ,ISOC(6),ISUB(8)
0077 C      COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT  ,LUO
0078 C      COMMON MODE      ,NANM      ,NCLI      ,NGEN      ,NGRW
0079 C      COMMON NOVR      ,NSECTS    ,NSOC      ,NSUB      ,NSUR
0080 C      COMMON NTOP      ,NU        ,NVEG
0081 C
0082 C      GRADING PARAMETERS
0083 C
0084 C      COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCFA(5)
0085 C      COMMON SPCC(5),HWHT(5,10),HWSLI(5,10),NHBP(5),PCEQ19(4)
0086 C      COMMON BENWF(5,10),REHCFY(5),REHVOL(5),HWSLF(5,10),USR
0087 C
0088 C      CATEGORY TEXT
0089 C
0090 C      COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0091 C      COMMON OVRD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0092 C      COMMON TPSL(49,13),VGTA(15,13)
0093 C
0094 C      EXPECTATION VALUES
0095 C
0096 C      COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0097 C      COMMON OVRBUN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0098 C      COMMON TOPSOI(33,6),VEGETA(10,6)
0099 C
0100 C      CATEGORY RESPONSES
0101 C
0102 C      COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0103 C      COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0104 C      COMMON RTOPSO(9),RVEGET(2)
0105 C
0106 C      FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0107 C
0108 C      COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHM
0109 C      COMMON CABS(2),CAC,CACP,CADF,CADH
0110 C      COMMON CADS,CAEAF,CAHSAP,CAHSTS,CAIF

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0111      COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0112      COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0113      COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0114  C
0115      INTEGER EXIT,CLMA,GDES,GWHY,QVRD,SBSL
0116      .INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0117      INTEGER CLIMAT,GENDES,GRWHYD,QVRBDN
0118      INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0119      INTEGER VEGETA,ANIMAL
0120      INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0121      INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0122      INTEGER RCLTEC,TTL
0123      INTEGER COMMON (1)
0124      EQUIVALENCE (COMMON (1), ITEK (1))
0125      EQUIVALENCE (IARRY (1), LUT)
0126      EQUIVALENCE (IARY2 (1), ISTRK)
0127      EQUIVALENCE (IARY2 (2), ISECT)
0128      EQUIVALENCE (IARY2 (3), ICODE)
0129      EQUIVALENCE (IARY2 (4), LEN)
0130      LOGICAL LER
0131      COMMON /ALTRN/ ALTN
0132      INTEGER ALTN(6,4),FMT(5,6),TSRFS(3),FMT1(6)
0133      DATA FMT/2H(1,2H(1,2H(2,2H(3,2H(4,2HOF,2H/, ,2H/, ,2H/, ,2H/, ,
0134      * 2H5.,2H10,2H10,2H10,2H10,2H1),2HF5,2HF5,2HF5,2HF5,2H ,
0135      * 2H.1,2H.1,2H.1,2H.1,2H ,2H) ,2H) ,2H) ,2H) /
0136      DATA TSRFS/2HTS,2HRF,2HS /
0137      DATA ICR/15/
0138  C
0139      5      IF(LER) CALL ERASE
0140              IF (LER) CALL HOME
0141      WRITE(LUT,1000)
0142              IF (MODE .NE. 4) GOTO 6
0143      IDFALT = 2
0144      GOTO 60
0145  C READ IN THE DEFAULT SLOPES AND PRESENT THEM TO THE USER
0146      6 CALL SPOLU(LUF,TSRFS,2,1,ICR)
0147              IF(LUF.GE.0) 9, 7
0148      7 WRITE(LUT,8) LUF
0149      READ(LUT,*) IAAVAL
0150              IF(IAAVAL.EQ.0) RETURN
0151      GOTO 11
0152      9 DO 10 JJ = 1, 6
0153      10 FMT1(JJ) = FMT(LUO,JJ)
0154      READ(LUF,FMT1) (HWSLF(LUO,J),J=1,NHBP(LUO))
0155      11 CALL SPOLU(LUF,TSRFS,2,2,ICR)
0156      WRITE(LUT,12) (ALTN(LUO,J),J=1,4)
0157      41      IF(IAAVAL.NE.1) 43, 42
0158      42 IDFALT = 2
0159      GOTO 60
0160      43 WRITE(LUT,44)
0161      DO 45 IHB =1,NHBP(LUO)
0162      45 WRITE(LUT,46) IHB, HWSLF (LUO, IHB)
0163      50 WRITE(LUT,51)
0164      READ(LUT,*) IDFALT
0165              IF(IDFALT.LT.1.OR.IDFALT.GT.2) GOTO 50
0166  C

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0167      60 IHB = 1
0168          SLMINB = 1.
0169          GOTO 70
0170 C    CALCULATE THE MINIMUM SLOPE BASED ON BENCH "IHB-1"
0171      65 CALL TSSCK(BENWF(LUO,IHB-1),HWSLI(LUO,IHB),HWHT(LUO,IHB),SLMINB)
0172 C    CALCULATE THE MINIMUM SLOPE BASED ON BENCH "IHB"
0173      70 CALL TSSCK(BENWI(LUO,IHB),HWSLI(LUO,IHB),HWHT(LUO,IHB),SLMINA)
0174 C    DETERMINE THE MINIMUM SLOPE AND LIMITING BENCH NUMBER
0175          SLMIN=FLOAT(IFIX(AMAX1(SLMINA,SLMINB)*100.+0.01))/100.
0176          LBN = IHB
0177          IF(SLMINA .LT. SLMINB) LBN = IHB - 1
0178 C      IF IDFALT = 1, WE HAVE THE SLOPE          IF IDFALT = 2, WE GET IT
0179 C    FROM THE USER
0180          IF (IDFALT .EQ. 1) 75, 80
0181      75 USR = HWSLF (LUO, IHB)
0182          GOTO 85
0183      80 WRITE (LUT, 82) IHB, SLMIN, LBN, IHB
0184          READ (LUT, *) USR
0185 C    TEST USR FOR VALIDITY
0186      85 SLMAX=AMIN1(19.,HWSLI(LUO,IHB))
0187          IF(LUO.EQ.1) SLMAX=AMIN1(5.7,HWSLI(LUO,IHB))
0188          IF(MODE.EQ.4) SLMAX=HWSLI(LUO,IHB)
0189          SLMAX=FLOAT(IFIX(SLMAX*100.))/100.
0190          IF(USR.GT.SLMAX) GOTO 100
0191          IF(USR.LT.SLMIN) 120, 500
0192 C    USR IS TOO LARGE
0193      100 WRITE (LUT, 101) IHB
0194          READ (LUT, *) IANS
0195          IF (LER) CALL ERASE
0196          IF (LER) CALL HOME
0197          IF (IANS .GE. 1.AND. IANS .LE. 3) GOTO (80, 5, 600) IANS
0198          GOTO 100
0199 C    USER SLOPE REQUEST IS TOO SMALL
0200      120 WRITE (LUT, 121) IHB, SLMIN
0201          READ (LUT, *) IANS
0202          IF (LER) CALL ERASE
0203          IF (LER) CALL HOME
0204          IF (IANS .LT. 1 .OR. IANS .GT. 4) GOTO 120
0205          GOTO (80, 5, 400, 600) IANS
0206 C    USER WANTS A SUGGESTION THAT WILL ENABLE US TO USE USR
0207 C    CALCULATE A BENCH WIDTH THAT WILL ACCOMODATE USR
0208      400 CALL TSDBR (HWHT(LUO,IHB),HWSLI(LUO,IHB),USR,BMIN)
0209 C      IF THE MINIMUM BENCH REQUEST IS GREATER THAN BENCHES "IHB"
0210 C    AND "IHB - 1", AN ADJUSTMENT WILL BE REQUIRED TO BOTH OF THEM.
0211 C    (THE SAME IS, OF COURSE, TRUE      IF BENCH "IHB" = BENCH "IHB - 1")
0212 C    OTHERWISE, AN ADJUSTMENT TO THE LESSER BENCH WILL DO THE JOB.
0213          IF (IHB .EQ. 1) GOTO 455
0214          IF (BENWI (LUO, IHB) .EQ. BENWF (LUO, IHB - 1)) GOTO 475
0215          IF (BENWI (LUO, IHB) .GT. BENWF (LUO, IHB - 1)) 425, 450
0216 C    AN ADJUSTMENT TO BENCH "IHB - 1" IS NEEDED
0217      425 IF (BMIN .GT. BENWI (LUO, IHB)) GOTO 475
0218          NUMBR = IHB - 1
0219          BENCH1 = BENWI (LUO, IHB - 1) + (BMIN - BENWF (LUO, IHB - 1))
0220      426 WRITE (LUT, 428) NUMBR, BENWI (LUO, IHB - 1), BENCH1, USR
0221          WRITE(LUT, 481)
0222          READ (LUT, *) IANS

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0223         IF(LE) CALL ERASE
0224         IF(LE) CALL HOME
0225         IF(IANS .LT. 1 .OR. IANS .GT. 5) GOTO 426
0226         GOTO (490, 510, 80, 5, 600) IANS
0227 C AN ADJUSTMENT TO BENCH "IHB" IS NEEDED
0228 450 IF (BMIN .GT. BENWF (LUO, IHB - 1)) 475, 455
0229 455 WRITE (LUT, 428) IHB, BENWI (LUO, IHB), BMIN, USR
0230 WRITE(LUT, 481)
0231 READ (LUT, *) IANS
0232 IF(LE) CALL ERASE
0233 IF(LE) CALL HOME
0234 IF (IANS .LT. 1 .OR. IANS .GT. 5) GOTO 455
0235 NUMBR = IHB
0236 BENCH1 = BMIN
0237 GOTO (490, 510, 80, 5, 600) IANS
0238 C AN ADJUSTMENT TO BOTH BENCHES "IHB" AND "IHB - 1" IS NEEDED
0239 475 BENCH1 = BMIN
0240 BENCH2 = BENWI (LUO, IHB - 1) + (BMIN - BENWF (LUO, IHB - 1))
0241 NMB = IHB - 1
0242 WRITE (LUT, 478) NMB, BENWI (LUO, IHB - 1), BENCH2, IHB,
0243 > BENWI (LUO, IHB), BENCH1, IHB
0244 480 WRITE (LUT, 481)
0245 READ (LUT, *) IANS
0246 IF(LE) CALL ERASE
0247 IF(LE) CALL HOME
0248 IF (IANS .LT. 1 .OR. IANS .GT. 5) GOTO 480
0249 GOTO (495, 520, 80, 5, 600) IANS
0250 C MAKE THE ADJUSTMENT TO BENCH "NUMBR" , AND ADJUST
0251 C BENCH LENGTHS FOR SEMI-CIRCULAR SPOILS
0252 490 IF (SPCC .EQ. 2.) GOTO 494
0253 IPTR = 1
0254 CALL TSBLA (IPTR, NUMBR, BENCH1, PARAM2)
0255 494 BENWI (LUO, NUMBR) = BENCH1
0256 GOTO 497
0257 C MAKE THE ADJUSTMENT TO BENCHES "IHB" AND "IHB - 1"
0258 495 IF (SPCC .EQ. 2.) GOTO 496
0259 IPTR = 2
0260 CALL TSBLA (IPTR, IHB, BENCH1, BENCH2)
0261 496 BENWI (LUO, IHB) = BENCH1
0262 BENWI (LUO, IHB - 1) = BENCH2
0263 C WE HAVE TO RECALCULATE THE WHOLE SHEBANG UP TO THIS POINT
0264 497 CALL TSRC (LUO, IHB, HWSLI, HWHT, HWSLF, BENWF, BENWI)
0265 C UPDATE INFORMATION : CALCULATE THE BENCH REMOVED BY USR
0266 500 HWSLF (LUO, IHB) = USR
0267 CALL TSDBR (HWHT (LUO, IHB), HWSLI (LUO, IHB), HWSLF (LUO, IHB), BENR)
0268 IF (IHB .EQ. 1) GOTO 505
0269 BENWF (LUO, IHB - 1) = BENWF (LUO, IHB - 1) - BENR
0270 505 BENWF (LUO, IHB) = BENWI (LUO, IHB) - BENR
0271 IHB = IHB + 1
0272 IF (IHB .LE. NHB (LUO)) GOTO 65
0273 RETURN
0274 C INPUT USER'S BENCH ADJUSTMENT(S)
0275 510 WRITE (LUT, 511) NUMBR
0276 READ (LUT, *) B1
0277 IF(LE) CALL ERASE
0278 IF(LE) CALL HOME

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0279         IF (B1 .LT. BENCH1) GOTO 510
0280         BENCH1 = B1
0281         GOTO 490
0282 520 WRITE (LUT, 511) NMB
0283         READ (LUT, *) B1
0284         IF (LER) CALL ERASE
0285         IF (LER) CALL HOME
0286         IF (B1 .LT. BENCH2) GOTO 520
0287         BENCH2 = B1
0288 522 WRITE (LUT, 511) IHB
0289         READ (LUT, *) B2
0290         IF (B2 .LT. BENCH1) GOTO 522
0291         BENCH1 = B2
0292         GOTO 495
0293 C   USER WANTS TO QUIT AFTER UNSUCCESSFUL TRIES. RESET FINAL DATA
0294 600 DO 605 IHB = 1, NHBP(LUO)
0295         BENWF (LUO, IHB) = BENWI (LUO, IHB)
0296 605 HWSLF (LUO, IHB) = HWSLI (LUO, IHB)
0297         RETURN
0298 C   FORMAT STATEMENTS
0299 1000 FORMAT(/,5X'*** INPUT FINAL SLOPES ***'//)
0300         8 FORMAT(/,5X'TSRFS OPEN ERROR'I7//,
0301         *5X'THE DEFAULT SLOPE VALUES ARE UNAVAILABLE'/,
0302         *5X'ENTER 0 TO EXIT, 1 TO CONTINUE -> _')
0303 12 FORMAT(/,5X' * '4A2' ALTERNATIVE *')
0304 44 FORMAT(/,5X'DEFAULT SLOPES :'/,
0305         *5X'HIGHWALL/BENCH PAIR   DEFAULT SLOPE VALUE'
0306         */,5X'-----'//)
0307 46 FORMAT(13X,I2,10X' *7X,F5.2)
0308 51 FORMAT(/,5X'SELECT ONE OF THE FOLLOWING :'/,
0309         *5X'1) USE THE DEFAULT VALUES'/,
0310         *5X'2) I'LL USE MY OWN VALUES'/,
0311         *5X'ENTER 1 OR 2 -> _')
0312 82 FORMAT(/,5X'THE MINIMUM REQUESTABLE SLOPE FOR HIGHWALL #'I2,/,
0313         *5X'IS 'F5.2' DEGREES. THIS SLOPE WILL REDUCE THE WIDTH OF'/,
0314         *5X'BENCH #'I2' TO ABOUT ZERO.'//,
0315         *5X'INPUT THE FINAL SLOPE FOR HIGHWALL #'I2' -> _')
0316 101 FORMAT(/,5X'ERROR -> SLOPE REQUESTED FOR HIGHWALL 'I2' TOO LARGE'/,
0317         *5X'YOU MAY :'/,
0318         *5X'1) RE-ENTER THE SLOPE VALUE'/,
0319         *5X'2) START OVER'/,
0320         *5X'3) EXIT FROM THIS ROUTINE'/,
0321         *5X'ENTER YOUR CHOICE HERE -> _')
0322 113 FORMAT(/,5X'SELECT ONE OF THE FOLLOWING OPTIONS :'/,
0323         *5X'1) LET ME USE MY OWN VALUE'/,
0324         *5X'2) GIVE ME A SUGGESTION THAT WILL ENABLE'/,
0325         *5X'   ME TO USE THE VALUE'/,
0326         *5X'3) GET ME OUT OF HERE'/,
0327         *5X'ENTER YOUR CHOICE HERE -> _')
0328 121 FORMAT(/,5X'ERROR -> THE CURRENT MINIMUM SLOPE REQUEST FOR'/,
0329         *5X'HIGHWALL 'I2' IS 'F5.2' DEGREES. YOU CAN :'/,
0330         *5X'1) RE-ENTER YOUR VALUE'/,
0331         *5X'2) START OVER'/,
0332         *5X'3) OBTAIN A SUGGESTION THAT WILL LET YOU USE THIS SLOPE'/,
0333         *5X'4) EXIT FROM THIS ROUTINE'/,
0334         *5X'ENTER YOUR CHOICE HERE -> _')

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0335 428 FORMAT(/,5X"SUGGESTION :"/,
0336      *5X"IF YOU INCREASE BENCH "I2" FROM "F7.2" FEET , TO"/,
0337      *5X"F7.2" FEET, THE FINAL SLOPE VALUE OF "F5.2" DEGREES"/,
0338      *5X"WILL WORK. ")
0339 478 FORMAT(/,5X"SUGGESTION :"/,
0340      *5X"IF YOU INCREASE BENCH "I2" FROM "F7.2" FEET, TO"/,
0341      *5X"F7.2" FEET, AND INCREASE BENCH "I2" FROM "F7.2" FEET, TO"/,
0342      *5X"F7.2" FEET, WE CAN USE THE SLOPE VALUE FOR HIGHWALL "I2",/
0343 481 FORMAT(/,5X"YOU CAN :"/,
0344      *5X"1) IMPLEMENT THE ABOVE SUGGESTION"/,
0345      *5X"2) USE YOUR OWN BENCH ADJUSTMENTS"/,
0346      *5X"3) INPUT A DIFFERENT SLOPE VALUE"/,
0347      *5X"4) RE-INPUT ALL FINAL SLOPES FOR THIS ALTERNATIVE"/,
0348      *5X"5) EXIT FROM THIS OPTION"/,
0349      *5X"ENTER YOUR CHOICE HERE -> _")
0350 511 FORMAT(/,5X"INPUT BENCH "I2"'S NEW VALUE -> _")
0351      END
0352 END$

```

&TSIHB T=00004 IS ON CR00015 USING 00039 BLKS R=0000

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0001  FTN4
0002                SUBROUTINE TSIHB
0003  C      ---TRUCK AND SHOVEL : INPUT HIGHWALL / BENCH INFORMATION---
0004  C
0005  C LEVEL 3
0006  C
0007  C      THE INITIAL HIGHWALL AND BENCH DESCRIPTION FOR THE CURRENT
0008  C      LAND USE OPTION IS ENTERED. IMMEDIATE INSPECTION AND EDIT
0009  C      OF THE INPUT DATA IS OFFERED. BENCH LENGTHS ARE TESTED
0010  C      FOR VALIDITY AND ADJUSTED IF REQUIRED.
0011  C
0012  C TSIHB IS ACCESSED BY TSGB AND SWAPPED IN BY PROGRAM TSIHX
0013  C
0014  C THE CALLING SEQUENCE IS :   CALL TSIHB
0015  C
0016  C
0017  C TSIHB CALLS THE SUBROUTINES :
0018  C      ERASE (TCS)
0019  C      HOME  (TCS)
0020  C      TSBLA (CLAIM)
0021  C
0022  C THE LOCAL VARIABLES ARE :
0023  C
0024  C      IPTK -> EDIT POINTER
0025  C
0026  C THIS ROUTINE WAS WRITTEN BY GREEN
0027  C
0028  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0029  C
0030  C =====
0031  C
0032  C      TEKTRONIX COMMON
0033  C
0034  C      COMMON ITEK (45)
0035  C
0036  C      LOGICAL UNITS AND COMMON LOCATION
0037  C
0038  C      COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0039  C
0040  C      POINTERS
0041  C
0042  C      COMMON EXIT   ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0043  C      COMMON IOPTN  ,IOVR(7),IHB   ,ISOC(6),ISUB(8)
0044  C      COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT ,LUD
0045  C      COMMON MODE   ,NANM   ,NCLI   ,NGEN   ,NGRW
0046  C      COMMON NOVR    ,NSECTS ,NSOC    ,NSUB    ,NSUR
0047  C      COMMON NTOP    ,NU     ,NVEG
0048  C
0049  C      GRADING PARAMETERS
0050  C
0051  C      COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCFA(5)
0052  C      COMMON SPCC(5),HWHT(5,10),HWSLI(5,10),NHBP(5),PCEQ19(4)
0053  C      COMMON BENWF(5,10),REHCPY(5),REHVOL(5),HWSLF(5,10),USR
0054  C
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0055 C    CATEGORY TEXT
0056 C
0057      COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0058      COMMON OVRD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0059      COMMON TPSSL(49,13),VGTA(15,13)
0060 C
0061 C    EXPECTATION VALUES
0062 C
0063      COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0064      COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0065      COMMON TOPSOI(33,6),VEGETA(10,6)
0066 C
0067 C    CATEGORY RESPONSES
0068 C
0069      COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0070      COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0071      COMMON RTOPSO(9),RVEGET(2)
0072 C
0073 C    FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0074 C
0075      COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHM
0076      COMMON CABS(2),CAC,CACP,CADF,CADH
0077      COMMON CADS,CAEAF,CAHSAP,CAHSTS,CAIP
0078      COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0079      COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0080      COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0081 C
0082      INTEGER EXIT,CLMA,GDES,GWHY,OVRD,SBSL
0083      INTEGER SCEC,SWHY,TPSSL,VGTA,ANIM
0084      INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0085      INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0086      INTEGER VEGETA,ANIMAL
0087      INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0088      INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0089      INTEGER RCLTEC,TTL
0090 C
0091      INTEGER COMMON (1)
0092      EQUIVALENCE (COMMON (1), ITEK (1))
0093      EQUIVALENCE (IARY (1), LUT)
0094      EQUIVALENCE (IARY2 (1), ISTRK)
0095      EQUIVALENCE (IARY2 (2), ISECT)
0096      EQUIVALENCE (IARY2 (3), ICODE)
0097      EQUIVALENCE (IARY2 (4), LEN)
0098 C
0099      LOGICAL LER
0100 C
0101      IF(IOPTN.EQ.2) GOTO 605
0102 C
0103 C    DISPLAY INSTRUCTIONS AND INITIATE LOOP
0104 C
0105      50 IHB = 0
0106      WRITE(LUT,1050)
0107      60 IHB = IHB + 1
0108      IF(IHB.GT.10) GOTO 600
0109      WRITE(LUT,1060) IHB
0110 C

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0111 C      INPUT THE HIGHWALL HEIGHT (ZERO MEANS QUIT)
0112 C
0113 100 WRITE(LUT,1100)
0114 READ(LUT,*) HWHT(LUO,IHB)
0115 IF(HWHT(LUO,IHB).EQ.0) GOTO 600
0116 IF(HWHT(LUO,IHB).GT.0) GOTO 200
0117 C
0118 WRITE(LUT,1150)
0119 GOTO 100
0120 C
0121 C      INPUT THE BENCH WIDTH
0122 C
0123 200 WRITE(LUT,1200)
0124 READ(LUT,*) BENWI(LUO,IHB)
0125 IF(BENWI(LUO,IHB).GT.0) GOTO 300
0126 C
0127 WRITE(LUT,1150)
0128 GOTO 200
0129 C
0130 C      INPUT THE INITIAL HIGHWALL SLOPE
0131 C
0132 300 WRITE(LUT,1300)
0133 READ(LUT,*) HWSLI(LUO,IHB)
0134 IF(HWSLI(LUO,IHB).GT.0..AND.HWSLI(LUO,IHB)
0135 +.LT.90.) GOTO 400
0136 C
0137 WRITE(LUT,1350)
0138 GOTO 300
0139 C
0140 C      INPUT THE BENCH LENGTH
0141 C
0142 400 WRITE(LUT,1400)
0143 READ(LUT,*) BENLEN(LUO,IHB)
0144 IF(BENLEN(LUO,IHB).LE.0.) GOTO 405
0145 IF(IHB.EQ.1) GOTO 500
0146 IF(BENLEN(LUO,IHB).LE.BENLEN(LUO,IHB-1)) GOTO 500
0147 C
0148 WRITE(LUT,4012) BENLEN(LUO,IHB-1)
0149 GOTO 400
0150 405 WRITE(LUT,1150)
0151 GOTO 400
0152 C
0153 C      GET THE NEXT PAIR
0154 C
0155 500 IF(LEP) CALL ERASE
0156 IF(LEP) CALL HOME
0157 GOTO 60
0158 C
0159 C      SET NHPF, THEN DISPLAY THE CURRENT DATA
0160 C
0161 600 NHPF(LUO) = IHB - 1
0162 IF(NHPF(LUO).EQ.0) RETURN
0163 605 WRITE(LUT,4010)
0164 READ(LUT,*) SPCC(LUO)
0165 IF(SPCC(LUO).LT.1..OR.SPCC(LUO).GT.2.) GOTO 605
0166 610 IF(LEP) CALL ERASE

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0167      IF(LER) CALL HOME
0168      WRITE(LUT,2000)
0169      DO 650 I = 1,NHBF(LUD)
0170 650 WRITE(LUT,2010) I,HWHT(LUD,I),HWSLI(LUD,I),
0171      >      BENWI(LUD,I),BENLEN(LUD,I)
0172 C
0173 C      GET THE H/B NUMBER OF EDIT(ZERO MEANS QUIT)
0174 C
0175 670 WRITE(LUT,2020)
0176      READ(LUT,*) IHB
0177      IF(IHB.EQ.0) GOTO 3000
0178      IF(IHB.GE.1.AND.IHB.LE.NHBF(LUD) + 1) GOTO 700
0179      WRITE(LUT,1010) IHB
0180      GOTO 670
0181 C
0182 C      GET ITEM TO BE EDITED - TEST FOR ADDITIONAL H/B PAIR
0183 C
0184 700 IF(IHB.NE.NHBF(LUD) + 1) GOTO 710
0185      IHB = NHBF(LUD)
0186      GOTO 500
0187 C
0188 710 WRITE(LUT,2030)
0189      READ(LUT,*) IPTR
0190      IF(IPTR.EQ.0) GOTO 610
0191      IF(IPTR.GE.1.AND.IPTR.LE.4)
0192 >GOTO(800,900,1000,1040) IPTR
0193      WRITE(LUT,1010)
0194      GOTO 710
0195 C
0196 C      EDIT THE HIGHWALL HEIGHT
0197 C
0198 800 WRITE(LUT,1100)
0199      READ(LUT,*) HWHT(LUD,IHB)
0200      IF(HWHT(LUD,IHB).GT.0.) 610, 800
0201 C
0202 C      EDIT THE BENCH WIDTH
0203 C
0204 900 WRITE(LUT,1200)
0205      READ(LUT,*) BENWI(LUD,IHB)
0206      IF(BENWI(LUD,IHB).GT.0.) 610,900
0207 C
0208 C      EDIT THE INITIAL HIGHWALL SLOPE
0209 C
0210 1000 WRITE(LUT,1300)
0211      READ(LUT,*) HWSLI(LUD,IHB)
0212      IF(HWSLI(LUD,IHB).GT.0..AND.HWSLI(LUD,IHB).LT.90.)
0213 > 610, 1000
0214 C
0215 C      EDIT THE BENCH LENGTH
0216 C
0217 1040 WRITE(LUT,1400)
0218      READ(LUT,*) BENLEN(LUD,IHB)
0219      IF(IHB.EQ.1.AND.BENLEN(LUD,1).GE.BENLEN(LUD,2)) GOTO 610
0220      IF(IHB.GT.1.AND.IHB.LT.NHBF(LUD)
0221 >.AND.BENLEN(LUD,IHB).LE.BENLEN(LUD,IHB-1)
0222 >.AND.BENLEN(LUD,IHB).GE.BENLEN(LUD,IHB+1)) GOTO 610

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0223      IF(IHB.EQ.NHBF(LUO).AND.BENLEN(LUO,IHB).LE.BENLEN(LUO,IHB-1))
0224      >GOTO 610
0225      IF(IHB.EQ.1) GOTO 1041
0226      IF(IHB.EQ.NHBF(LUO)) GOTO 1042
0227      WRITE(LUT,4011) BENLEN(LUO,IHB+1),BENLEN(LUO,IHB-1)
0228      GOTO 1040
0229  1041 WRITE(LUT,4013) BENLEN(LUO,2)
0230      GOTO 1040
0231  1042 WRITE(LUT,4012) BENLEN(LUO,IHB-1)
0232      GOTO 1040
0233  C
0234  C      CHECK SEMI-CIRCULAR SPOILS FOR EXCESSIVE BENCH LENGTHS
0235  C
0236  3000 IF(SPCC.EQ.2.) RETURN
0237      IPTK = 3
0238      CALL TSBLA(IPTK,ICHB,PARAM1,PARAM2)
0239      IF(IPTK.EQ.0.AND.10PTN.EQ.1) GOTO 610
0240      RETURN
0241  C
0242  C      FORMAT STATEMENTS
0243  C
0244  1010 FORMAT(2X,I2" ?? ERROR -> RE-INPUT.")
0245  1050 FORMAT(/,5X"INPUT WALL/BENCH INFORMATION :"/,
0246      +5X"> BEGIN WITH BOTTOM HIGHWALL AND BENCH"/,
0247      +5X" PROCEEDING UPWARD UNTIL DONE"/,
0248      +5X"> WHEN DONE,ENTER ZERO FOR THE HEIGHT"/,
0249      +5X" OF WHAT WOULD HAVE BEEN THE NEXT HIGHWALL"/,
0250      +5X"> 10 HIGHWALL//BENCH PAIRS ARE ALLOWED"/
0251      +5X"> WIDTH OF TOP BENCH CAN BE NO GREATER/
0252      +5X" THAN ONE HALF THE WIDTH OF THE HILL TOP"/)
0253  C
0254  1060 FORMAT(/,5X"NOW DESCRIBING HIGHWALL/BENCH PAIR #",I2,/)
0255  C
0256  1100 FORMAT( 5X"VERTICAL HEIGHT OF HIGHWALL(FEET) -> _")
0257  C
0258  1150 FORMAT(/,5X"ERROR -> VALUE MUST BE GREATER THAN ZERO."/)
0259  C
0260  1200 FORMAT(5X"WIDTH OF THE BENCH(FEET) -> _")
0261  C
0262  1300 FORMAT(5X"INITIAL SLOPE OF THE HIGHWALL(DEGREES) -> _")
0263  C
0264  1350 FORMAT(5X"ERROR-> SLOPE MUST BE BETWEEN 0 AND 90 DEG.")
0265  C
0266  1400 FORMAT(5X"LENGTH OF BENCH ALONG OUTSIDE EDGE(FEET) -> _")
0267  C
0268  2000 FORMAT(15X"*** CURRENT HIGHWALL/BENCH DATA ***"/,
0269      >2X"PAIR #   HW HEIGHT   HW SLOPE   BENCH WIDTH   BENCH LENGTH"/
0270      >2X"-----   -----   -----   -----   -----"/)
0271  C
0272  2010 FORMAT(2X,I2,4X,F9.2,2X,F8.2,2X,F11.2,2X,F13.2)
0273  C
0274  2020 FORMAT(/2X"HIGHWALL/BENCH PAIR NUMBER OF EDIT(0 TO QUIT) ->_")
0275  C
0276  2030 FORMAT(/2X"ITEM TO BE EDITED ?"/
0277      >          2X"0 -> DONE"/
0278      >          2X"1 -> HIGHWALL HEIGHT"/,

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0279      >      2X*2 -> BENCH WIDTH"/,
0280      >      2X*3 -> HIGHWALL SLOPE"/,
0281      >      2X*4 -> BENCH LENGTH"/,
0282      >      2X*ENTER YOUR SELECTION -> _")
0283 C
0284      4010 FORMAT(/5X*INPUT SPOIL FILE CONFIGURATION CODE :"/
0285      >      5X*1-> SEMI-CIRCULAR SPOILS"/,
0286      >      5X*2-> RECTANGULAR SPOILS"/,
0287 P      >      5X*ENTER CONFIGURATION BEST DESCRIBING SPOILS -> _")
0288 C
0289      4011 FORMAT(/5X*ERROR. BENCH LENGTH MUST BE GREATER THAN OR"/
0290      >      5X*EQUAL TO"F10.2" FEET, AND LESS THAN OR EQUAL"
0291      >/      5X*TO"F10.2" FEET. TRY AGAIN.")
0292 C
0293      4012 FORMAT(/5X*ERROR. BENCH LENGTH MUST BE LESS THAN OR EQUAL"/
0294      >      5X*TO"F10.2" FEET. TRY AGAIN.")
0295 C
0296      4013 FORMAT(/5X*ERROR. BENCH LENGTH MUST BE GREATER THAN OR"/
0297      >      5X*EQUAL TO"F10.2" FEET. TRY AGAIN.")
0298 C
0299 C
0300      END
0301 END$

```

&TSRC T=00004 IS ON CR00015 USING 00010 BLKS R=0000

```
0001 FTN4
0002 SUBROUTINE TSRC (LUO,NUMBR,HWSLI,HWHT,HWSLF,BENWF,BENWI)
0003 C ---TRUCK AND SHOVEL RECALCULATIONS---
0004 C
0005 C LEVEL 4
0006 C
0007 C THIS ROUTINE RECALCULATES FINAL BENCHES WHEN THE USER
0008 C INITIATES A 'MID-STREAM' CHANGE IN BENCH WIDTH.
0009 C
0010 C TSRC IS ACCESSED BY TSIFN
0011 C
0012 C THE CALLING SEQUENCE IS :
0013 C
0014 C CALL TSRC (LUO,NUMBR,HWSLI,HWHT,HWSLF,BENWF,BENWI)
0015 C
0016 C WHERE :
0017 C
0018 C LUO -> LAND USE OPTION
0019 C NUMBR -> CURRENT HIGHWALL / BENCH PAIR
0020 C HWSLI -> INITIAL HIGHWALL SLOPES
0021 C HWHT -> HIGHWALL HEIGHTS
0022 C HWSLF -> FINAL HIGHWALL SLOPES
0023 C BENWF -> FINAL BENCH WIDTHS
0024 C BENWI -> INITIAL BENCH WIDTHS
0025 C
0026 C SUBROUTINES SCHEDULED:
0027 C
0028 C TSDBR (CLAIM)
0029 C
0030 C LOCAL VARIABLES:
0031 C
0032 C BENR -> BENCH REMOVED
0033 C
0034 C THIS ROUTINE WAS WRITTEN BY GREEN
0035 C
0036 C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0037 C
0038 C =====
0039 C
0040 C DIMENSION HWSLI(5,10),HWHT(5,10),HWSLF(5,10),BENWF(5,10),
0041 C * BENWI(5,10)
0042 C
0043 C IF WE'RE AT NUMBR = 1, WE'RE DONE
0044 C
0045 C IF (NUMBR .EQ. 1) RETURN
0046 C
0047 C START RECALCULATING. WE DON'T HAVE TO CHECK SLOPES
0048 C HERE, BECAUSE AN INCREASE IN ANY BENCH WIDTH WILL
0049 C NOT AFFECT RESTRICTIONS TO A PREVIOUS LEGAL SLOPE REQUEST
0050 C
0051 C DO 2 JJ = 1, 10
0052 C 2 BENWF (LUO, JJ) = BENWI (LUO, JJ)
0053 C 3 J = 1
0054 C 5 CALL TSDBR (HWHT (LUO, J),HWSLI (LUO, J),HWSLF (LUO, J),BENR)
```



```
0055      IF (J .EQ. 1) GOTO 10
0056      BENWF (LUO, J-1) = BENWF (LUO, J-1) - BENR
0057  10  BENWF (LUO, J) = BENWF (LUO, J) - BENR
0058      J = J + 1
0059      IF (J .LT. NUMER) GOTO 5
0060      RETURN
0061      ENII
0062  ENDS
```

&TSRIE T=00004 IS ON CR00015 USING 00020 BLKS R=0000

```
0001  FTN4
0002                      SUBROUTINE TSRIE
0003  C      ---TRUCK AND SHOVEL REHANDLE INPUT AND EDIT---
0004  C
0005  C  LEVEL 3
0006  C
0007  C  TSRIE IS ACCESSED BY TSGE
0008  C
0009  C  THE CALLING SEQUENCE IS : CALL TSRIE
0010  C
0011  C  THE LOCAL VARIABLES ARE :
0012  C
0013  C      ICHNG  -> EDIT POINTER
0014  C
0015  C  THIS ROUTINE WAS WRITTEN BY GREEN/EASTMAN
0016  C
0017  C  ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0018  C
0019  C  =====
0020  C
0021  C      TEKTRONIX COMMON
0022  C
0023  C      COMMON ITEK (45)
0024  C
0025  C      LOGICAL UNITS AND COMMON LOCATION
0026  C
0027  C      COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0028  C
0029  C      POINTERS
0030  C
0031  C      COMMON EXIT      ,IANM(3),ICL1(2),IGEN(3),IGRW(5)
0032  C      COMMON IOPTN     ,IOVR(7),IHB      ,ISOC(6),ISUB(8)
0033  C      COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT  ,LUD
0034  C      COMMON MODE      ,NANM      ,NCLI      ,NGEN      ,NGRW
0035  C      COMMON NOVR      ,NSECTS    ,NSOC      ,NSUB      ,NSUR
0036  C      COMMON NTOP      ,NU        ,NVEG
0037  C
0038  C      GRADING PARAMETERS
0039  C
0040  C      COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCPA(5)
0041  C      COMMON SPCC(5),HWHT(5,10),HWSLI(5,10),NHRF(5),PCEQ19(4)
0042  C      COMMON BENWF(5,10),REHCPY(5),REHVOL(5),HWSLF(5,10),USR
0043  C
0044  C      CATEGORY TEXT
0045  C
0046  C      COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0047  C      COMMON OVRBD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0048  C      COMMON TPSL(49,13),VGTA(15,13)
0049  C
0050  C      EXPECTATION VALUES
0051  C
0052  C      COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0053  C      COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0054  C      COMMON TOPSOI(33,6),VEGETA(10,6)
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0055 C
0056 C CATEGORY RESPONSES
0057 C
0058 COMMON RANIMA(3),RCLIMA(2),RGENDIE(3),RGRWHY(5)
0059 COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0060 COMMON RTOPSO(9),RVEGET(2)
0061 C
0062 C FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0063 C
0064 COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHM
0065 COMMON CABS(2),CAC,CACP,CADF,CADH
0066 COMMON CADS,CAEAF,CAHSAF,CAHSTS,CAIP
0067 COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0068 COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0069 COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0070 C
0071 INTEGER EXIT,CLMA,GDES,GWHY,OVRBD,SBSL
0072 INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0073 INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0074 INTEGER SOCECN,SUBSO1,SURHYD,TOPSO1
0075 INTEGER VEGETA,ANIMAL
0076 INTEGER RCLIMA,RGENDIE,RGRWHY,ROVRBD,RSOCEC
0077 INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0078 INTEGER RCLTEC,TTL
0079 C
0080 INTEGER COMMON (1)
0081 EQUIVALENCE (COMMON (1), ITEK (1))
0082 EQUIVALENCE (IARY (1), LUT)
0083 EQUIVALENCE (IARY2 (1), ISTRK)
0084 EQUIVALENCE (IARY2 (2), ISECT)
0085 EQUIVALENCE (IARY2 (3), ICODE)
0086 EQUIVALENCE (IARY2 (4), LEN)
0087 C
0088 LOGICAL LER
0089 C
0090 C
0091 COMMON /ALTRN/ ALTN
0092 INTEGER ALTN (6,4)
0093 C
0094 C DISPLAY CURRENT DATA [ IF EDIT MODE ]
0095 C
0096 IF (MODE .EQ. 4) GOTO 5
0097 IF (LER) CALL ERASE
0098 IF (LER) CALL HOME
0099 WRITE (LUT, 1000) (ALTN (LUO, J), J = 1, 4)
0100 5 IF (IOPTN .NE. 1) 7, 40
0101 7 WRITE (LUT, 10) REHVOL (LUO), REHCFY (LUO)
0102 12 WRITE(LUT, 14)
0103 READ (LUT, *) ICHNG
0104 IF (ICHNG .EQ. 0) RETURN
0105 IF (ICHNG .GE. 1.AND.ICHNG .LE. 2) 17, 15
0106 15 WRITE (LUT, 16) ICHNG
0107 GOTO 5
0108 17 GOTO (40, 45) ICHNG
0109 C
0110 C INPUT REHANDLE INFORMATION

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0111 C
0112 40 WRITE (LUT, 41)
0113 READ (LUT, *) REHVOL (LUO)
0114 IF (IOPTN .EQ. 1) 45, 5
0115 45 WRITE (LUT, 46)
0116 READ (LUT, *) REHCPY (LUO)
0117 IF (IOPTN .EQ. 1) RETURN
0118 GOTO 5
0119 C
0120 C FORMAT STATEMENTS
0121 C
0122 10 FORMAT(/,5X'REHANDLE INFORMATION :',
0123 *5X'1 -> REHANDLE VOLUME IS ->'F10.1' CUBIC YARDS',
0124 *5X'2 -> REHANDLE COST IS ->'F10.1' CENTS/CU. YD.')
0125 C
0126 14 FORMAT(/,5X'ENTER THE ITEM YOU WISH TO CHANGE (0 TO QUIT) -> _')
0127 C
0128 16 FORMAT(/,5X,I2' ? ERROR -> ILLEGAL ENTRY. RE-SELECT')
0129 C
0130 41 FORMAT(/,5X'TOTAL VOLUME OF REHANDLE (CU.YDS) -> _')
0131 C
0132 46 FORMAT(/,5X'COST OF REHANDLE (CENTS/CU.YD.) -> _')
0133 C
0134 1000 FORMAT(/5X'** TRUCK AND SHOVEL SEGMENT - '4A2' ALTERNATIVE **')
0135 END
0136 END$

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8TSSCI T=00004 IS ON CR00015 USING 00040 BLKS R=0000

```
0001  FTN4
0002                      SUBROUTINE TSSCI
0003  C      ---TRUCK AND SHOVEL : SELECTIVE CHANGES TO INITIAL DATA---
0004  C
0005  C  LEVEL 3
0006  C
0007  C      THIS ROUTINE SCHEDULES SELECTIVE CHANGES TO INITIAL HIGHWALL
0008  C      AND BENCH DATA.
0009  C
0010  C  TSSCI IS ACCESSED BY TSGE AND SWAPPED IN BY PROGRAM TSSCX
0011  C
0012  C  THE CALLING SEQUENCE IS :    CALL TSSCI
0013  C
0014  C  SUBROUTINES SCHEDULED:
0015  C
0016  C      ERASE (TCS)
0017  C      HOME  (TCS)
0018  C      TSDR  (CLAIM)
0019  C      TSBLA (CLAIM)
0020  C
0021  C  LOCAL VARIABLES:
0022  C
0023  C      BENCH  -> USER INPUT BENCH WIDTH
0024  C      BRNEW  -> BENCH REMOVED BY NEW INITIAL SLOPE
0025  C      BROLD  -> BENCH REMOVED BY THE OLD INITIAL SLOPE
0026  C      HEIGHT -> USER INPUT HIGHWALL HEIGHT
0027  C      IHBB   -> NUMBER OF HIGHWALL/BENCH BELOW CURRENT PAIR
0028  C      SLI    -> USER INPUT INITIAL SLOPE
0029  C
0030  C  THIS ROUTINE WAS WRITTEN BY EASTMAN / GREEN
0031  C
0032  C  ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0033  C  =====
0034  C
0035  C      TEKTRONIX COMMON
0036  C
0037  C      COMMON ITEK (45)
0038  C
0039  C      LOGICAL UNITS AND COMMON LOCATION
0040  C
0041  C      COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0042  C
0043  C      POINTERS
0044  C
0045  C      COMMON EXIT      ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0046  C      COMMON IOPTN     ,IOVR(7),IHB      ,ISOC(6),ISUB(8)
0047  C      COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT ,LUO
0048  C      COMMON MODE      ,NANM      ,NCLI      ,NGEN      ,NGRW
0049  C      COMMON NOVR      ,NSECTS    ,NSOC      ,NSUB      ,NSUR
0050  C      COMMON NTOP      ,NU        ,NVEG
0051  C
0052  C      GRADING PARAMETERS
0053  C
0054  C      COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCFA(5)
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0055      COMMON SPCC(5),HWHT(5,10),HWSL1(5,10),NHBP(5),PCEQ19(4)
0056      COMMON BENWF(5,10),REHCFY(5),REHVOL(5),HWSLF(5,10),USR
0057      C
0058      C      CATEGORY TEXT
0059      C
0060      COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0061      COMMON OVRD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0062      COMMON TPSL(49,13),VGTA(15,13)
0063      C
0064      C      EXPECTATION VALUES
0065      C
0066      COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0067      COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0068      COMMON TOPSOI(33,6),VEGETA(10,6)
0069      C
0070      C      CATEGORY RESPONSES
0071      C
0072      COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0073      COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0074      COMMON RTOPSO(9),RVEGET(2)
0075      C
0076      C      FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0077      C
0078      COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHM
0079      COMMON CABS(2),CAC,CACP,CADF,CADH
0080      COMMON CADS,CAEAF,CAHSAF,CAHSTS,CAIF
0081      COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0082      COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0083      COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0084      C
0085      INTEGER EXIT,CLMA,GDES,GWHY,OVRD,SBSL
0086      INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0087      INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0088      INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0089      INTEGER VEGETA,ANIMAL
0090      INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0091      INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0092      INTEGER RCLTEC,TTL
0093      C
0094      INTEGER COMMON (1)
0095      EQUIVALENCE (COMMON (1), ITEK (1))
0096      EQUIVALENCE (IARY (1), LUT)
0097      EQUIVALENCE (IARY2 (1), ISTRK)
0098      EQUIVALENCE (IARY2 (2), ISECT)
0099      EQUIVALENCE (IARY2 (3), ICODE)
0100      EQUIVALENCE (IARY2 (4), LEN)
0101      C
0102      LOGICAL LER
0103      C
0104      C      GET H/B NUMBER OF EDIT
0105      C
0106      10      IF (LER) CALL ERASE
0107      100 WRITE (LUT, 111) NHBP (LUO)
0108      101 READ (LUT, *) IHB
0109      IF (IHB .EQ. 0) RETURN
0110      IF (IHB .GT. 0 .AND. IHB .LE. NHBP (LUO)) GOTO 150

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0111 C
0112 WRITE (LUT, 112) IHB
0113 GOTO 101
0114 C
0115 C GET EDIT ITEM
0116 C
0117 150 IF (LER) CALL ERASE
0118 IF (LER) CALL HOME
0119 WRITE (LUT, 151) IHB
0120 152 READ (LUT, *) ICODE
0121 IF (ICODE .EQ. 0) GOTO 10
0122 IF (ICODE .GE. 1 .AND. ICODE .LE. 4) GOTO 200
0123 WRITE (LUT, 112) ICODE
0124 GOTO 152
0125 200 GOTO (210, 300, 400, 500) ICODE
0126 C
0127 C CHANGE THE HIGHWALL HEIGHT
0128 C
0129 210 WRITE (LUT, 211) HWHT (LUO, IHB)
0130 READ (LUT, *) HEIGHT
0131 C
0132 C GET THE OLD 'BR' AND THE NEW 'BR'
0133 C
0134 215 CALL TSDBR (HWHT (LUO, IHB), HWSLI (LUO, IHB),
0135 > HWSLF (LUO, IHB), BROLD)
0136 CALL TSDBR (HEIGHT, HWSLI (LUO, IHB), HWSLF (LUO, IHB), BRNEW)
0137 C
0138 C IF THE NEW HEIGHT IS LESS THAN THE OLD ONE, JUST UPDATE TERRACES
0139 C
0140 IF (HEIGHT .LE. HWHT (LUO, IHB)) GOTO 220
0141 C
0142 C IS IT THE TOP HIGHWALL/BENCH PAIR ?
0143 C
0144 IF (IHB .EQ. NHBF (LUO)) GOTO 217
0145 C
0146 C TEST TO SEE IF UPPER BENCH WILL ALLOW NEW HEIGHT
0147 C
0148 IF (BRNEW .GT. BROLD + BENWF (LUO, IHB)) GOTO 225
0149 C
0150 C IS IT THE BOTTOM HIGHWALL/BENCH PAIR ?
0151 C
0152 IF (IHB .EQ. 1) GOTO 220
0153 C
0154 C TEST TO SEE IF LOWER BENCH WILL ALLOW NEW HEIGHT
0155 C
0156 217 IF (BRNEW .GT. BROLD + BENWF (LUO, IHB-1)) GOTO 230
0157 C
0158 C IS IT THE BOTTOM HIGHWALL/BENCH PAIR ?
0159 C
0160 220 IF (IHB .EQ. 1) GOTO 222
0161 C
0162 C UPDATE BOTH UPPER AND LOWER TERRACE WIDTHS
0163 C
0164 BENWF (LUO, IHB-1) = BENWF (LUO, IHB-1) - (BRNEW - BROLD)
0165 C
0166 222 BENWF (LUO, IHB) = BENWF (LUO, IHB) - (BRNEW - BROLD)

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0167 C
0168 C      UPDATE THE HIGHWALL HEIGHT
0169 C
0170 223      IF (SPCC .EQ. 2.) GOTO 224
0171          IPTR = 4
0172          CALL TSBLA (IPTR,IHB,HEIGHT,PARAM2)
0173 224 HWHT (LUO, IHB) = HEIGHT
0174          GOTO 150
0175 C
0176 C      ERROR -> NOT ENOUGH ROOM ON THE TERRACE
0177 C
0178 225 IHBB = IHB
0179 227 WRITE (LUT, 226) IHBB
0180          IF (LER) CALL BELL
0181          IF (LER) CALL TINPT (IANS)
0182          GOTO 150
0183 C
0184 230 IHBB = IHB - 1
0185          GOTO 227
0186 C
0187 C      CHANGE THE INITIAL WIDTH OF THE BENCH
0188 C
0189 300 WRITE (LUT, 301) BENWI (LUO, IHB)
0190          READ (LUT, *) BENCH
0191 C
0192 C      TEST WIDTH.      IF NEW WIDTH > OLD WIDTH, NO PROBLEM
0193 C
0194 305      IF (BENCH .GE. BENWI (LUO, IHB)) GOTO 322
0195 C
0196 C      DOES IT WIPE OUT THE TERRACE ?
0197 C
0198          IF ((BENWI (LUO,IHB) - BENCH).LE.BENWF (LUO,IHB)) GOTO 322
0199          WRITE (LUT, 306) BENWF (LUO, IHB), BENWI (LUO, IHB)
0200          GOTO 300
0201 C
0202 C      UPDATE TERRACE AND BENCH
0203 C
0204 322 BENWF (LUO, IHB) = BENWF (LUO, IHB) - (BENWI (LUO, IHB) - BENCH)
0205 323      IF (SPCC .EQ. 2.) GOTO 325
0206          IPTR = 1
0207          CALL TSBLA (IPTR,IHB,BENCH,PARAM2)
0208 325 BENWI (LUO, IHB) = BENCH
0209          GOTO 150
0210 C
0211 C      CHANGE THE INITIAL SLOPE OF THE HIGHWALL
0212 C
0213 400 WRITE (LUT, 401) HWSLI (LUO, IHB)
0214          READ (LUT, *) SLI
0215 C
0216 C      IS THIS SLOPE GREATER THAN THE PREVIOUSLY INPUT FINAL SLOPE ?
0217 C
0218 405      IF (SLI .GE. HWSLF (LUO, IHB)) GOTO 432
0219          WRITE (LUT, 406) HWSLF (LUO, IHB)
0220          GOTO 400
0221 432 CALL TSDBR (HWHT (LUO, IHB), SLI, HWSLF (LUO, IHB), BRNEW)
0222          CALL TSDBR (HWHT (LUO, IHB), HWSLI (LUO, IHB),

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0223      >          HWSLF (LUO, IHB), BROLD)
0224      C
0225      C      UPDATE THE TERRACE WIDTH AND INITIAL SLOPE
0226      C
0227      BENWF (LUO, IHB) = BENWF (LUO, IHB) + (BROLD - BRNEW)
0228      434      IF (SPCC .EQ. 2.) GOTO 436
0229      IPTR = 5
0230      CALL TSBLA (IPTR, IHB, SLI, PARAM2)
0231      436 HWSLI (LUO, IHB) = SLI
0232      GOTO 150
0233      C
0234      C      CHANGE THE BENCH LENGTH
0235      C
0236      500 WRITE (LUT, 501) BENLEN (LUO, IHB)
0237      READ (LUT, *) BENLEN (LUO, IHB)
0238      IPTR = 3
0239      IF (SPCC .EQ. 1.) CALL TSBLA (IPTR, ICHB, PARAM1, PARAM2)
0240      GOTO 150
0241      C
0242      C      FORMAT STATEMENTS
0243      C
0244      111 FORMAT(/,5X"WHICH HIGHWALL/BENCH PAIR DO YOU WISH TO CONSIDER ?"/
0245      >5X"(ENTER A NUMBER BETWEEN 1 AND 'I2" OR ZERO TO QUIT -> _")
0246      C
0247      112 FORMAT(/,2X,I2" ? ERROR -> ILLEGAL ENTRY. RE-SELECT.-> _")
0248      C
0249      151 FORMAT(/,5X"WHERE IS YOUR CHANGE ON WALL/BENCH #'I2" ?"/,
0250      >5X"0 -> NO FURTHER CHANGES"/,
0251      >5X"1 -> HIGHWALL HEIGHT"/,
0252      >5X"2 -> BENCH WIDTH"/,
0253      >5X"3 -> INITIAL SLOPE OF THE HIGHWALL"/,
0254      >5X"4 -> LENGTH OF THE BENCH"/,
0255      >5X"ENTER YOUR CHOICE HERE -> _")
0256      C
0257      211 FORMAT(/,5X"CURRENT HEIGHT = 'F7.2" FEET"/,
0258      >5X"ENTER YOUR NEW HEIGHT HERE -> _")
0259      C
0260      226 FORMAT(/,5X"ERROR -> NOT ENOUGH ROOM ON BENCH 'I2/
0261      >5X"FOR THAT HEIGHT IN COMBINATION WITH THE BENCH WIDTH"/,
0262      >5X"AND THE PREVIOUSLY REQUESTED FINAL SLOPES. TRY AGAIN.")
0263      C
0264      301 FORMAT(/,5X"CURRENT BENCH WIDTH = 'F7.2" FEET"/,
0265      >5X"ENTER YOUR NEW BENCH WIDTH HERE -> _")
0266      C
0267      306 FORMAT(/,5X"ERROR -> BENCH WIDTH REQUESTED IS TOO SMALL"/,
0268      >5X"CURRENT TERRACE WIDTH IS : 'F7.1" FEET"/,
0269      >5X"CURRENT INITIAL BENCH WIDTH IS : 'F7.1" FEET. RE-TRY"/)
0270      C
0271      401 FORMAT(/,5X"CURRENT SLOPE = 'F5.2" DEGREES"/
0272      >5X"ENTER YOUR NEW SLOPE HERE -> _")
0273      C
0274      406 FORMAT(/,5X"ERROR -> INITIAL SLOPE REQUESTED IS"/,
0275      >5X"LESS THAN PREVIOUSLY INPUT FINAL SLOPE OF 'F5.2,/
0276      >5X"DEGREES. RE-TRY."/)
0277      C
0278      501 FORMAT(/,5X"CURRENT BENCH LENGTH = 'F7.1" FEET"/

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0279      >5X"ENTER NEW BENCH LENGTH -> _")
0280  C
0281      1000 FORMAT (1X"SELECT ONE OF THE FOLLOWING :"/
0282      >      1X"1 -> RETAIN THE CURRENT BENCH LENGTH(S)"/
0283      >      1X"2 -> RETAIN THE ANGLE(S) DEFINED BY THE CURRENT DATA"/
0284      >1X"ENTER YOUR SELECTION ->_")
0285      END
0286  END$

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&TSSCF T=00004 IS ON CR00015 USING 00036 BLKS R=0000

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0001 FTN4
0002 SUBROUTINE TSSCF
0003 C ---TRUCK AND SHOVEL : SELECTIVE CHANGES TO FINAL SLOPES---
0004 C
0005 C LEVEL 3
0006 C
0007 C THIS ROUTINE SCHEDULES SELECTIVE CHANGES TO FINAL SLOPE VALUES
0008 C
0009 C TSSCF IS ACCESSED BY TSCE AND SWAPPED IN BY PROGRAM TSSCO
0010 C
0011 C THE CALLING SEQUENCE IS : CALL TSSCF
0012 C
0013 C SUBROUTINES SCHEDULED:
0014 C
0015 C ERASE (TCS)
0016 C HOME (TCS)
0017 C TSDBR (CLAIM)
0018 C TSSCK (CLAIM)
0019 C
0020 C LOCAL VARIABLES:
0021 C
0022 C AVAIL -> CURRENT AVAILABLE BENCH
0023 C EAT -> AMOUNT OF BENCH "EATEN" BY NEW FINAL SLOPE
0024 C EATA -> AMOUNT OF BENCH ABOVE EATEN BY NEW FINAL SLOPE
0025 C EATB -> AMOUNT OF BENCH BELOW EATEN BY NEW FINAL SLOPE
0026 C IANS -> ANSWER CELL
0027 C NUM1 -> BENCH NUMBER OF BENCH BELOW
0028 C NUMB -> CURRENT BENCH NUMBER
0029 C SLMIN -> MINIMUM SLOPE REQUEST
0030 C SLMINA -> MINIMUM SLOPE BASED ON BENCH ABOVE
0031 C SLMINB -> MINIMUM SLOPE BASED ON BENCH BELOW
0032 C SLOUT -> MINIMUM SLOPE PRESENTED TO THE USER
0033 C SLPDES -> USER'S SLOPE REQUEST
0034 C
0035 C THIS ROUTINE WAS WRITTEN BY EASTMAN AND MODIFIED BY GREEN
0036 C
0037 C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0038 C
0039 C =====
0040 C
0041 C TEKTRONIX COMMON
0042 C
0043 C COMMON ITEK (45)
0044 C
0045 C LOGICAL UNITS AND COMMON LOCATION
0046 C
0047 C COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0048 C
0049 C POINTERS
0050 C
0051 C COMMON EXIT ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0052 C COMMON IOPTN ,IOVR(7),IHR ,ISOC(6),ISUB(8)
0053 C COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT ,LUO
0054 C COMMON MODE ,NANM ,NCLI ,NGEN ,NGRW
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0055      COMMON NOVR      ,NSECTS ,NSOC      ,NSUB      ,NSUR
0056      COMMON NTOP      ,NU          ,NVEG
0057  C
0058  C      GRADING PARAMETERS
0059  C
0060      COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCFA(5)
0061      COMMON SPCC(5),HWHT(5,10),HWSL1(5,10),NHEF(5),PCEQ19(4)
0062      COMMON BENWF(5,10),REHCPY(5),REHVOL(5),HWSLF(5,10),USR
0063  C
0064  C      CATEGORY TEXT
0065  C
0066      COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0067      COMMON OVRD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0068      COMMON TP SL(49,13),VGTA(15,13)
0069  C
0070  C      EXPECTATION VALUES
0071  C
0072      COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0073      COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0074      COMMON TOPSOI(33,6),VEGETA(10,6)
0075  C
0076  C      CATEGORY RESPONSES
0077  C
0078      COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0079      COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0080      COMMON RTOPSO(9),RVEGET(2)
0081  C
0082  C      FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0083  C
0084      COMMON CAAHM,CABAH,CABFN(3),CABFF(3),CABHM
0085      COMMON CABS(2),CAC,CACP,CADF,CAIH
0086      COMMON CADS,CAEAF,CAHSAF,CAHSTS,CAIF
0087      COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0088      COMMON CSTRF,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0089      COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0090  C
0091      INTEGER EXIT,CLMA,GDES,GWHY,OVRD,SBSL
0092      INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0093      INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0094      INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0095      INTEGER VEGETA,ANIMAL
0096      INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0097      INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0098      INTEGER RCLTEC,TTL
0099  C
0100      INTEGER COMMON (1)
0101      EQUIVALENCE (COMMON (1), ITEK (1))
0102      EQUIVALENCE (IARRY (1), LUT)
0103      EQUIVALENCE (IARY2 (1), ISTRK)
0104      EQUIVALENCE (IARY2 (2), ISECT)
0105      EQUIVALENCE (IARY2 (3), ICODE)
0106      EQUIVALENCE (IARY2 (4), LEN)
0107  C
0108      LOGICAL LER
0109  C
0110  C

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0111      COMMON /ALTRN/ ALTN
0112 C
0113      INTEGER ALTN (6,4)
0114 C
0115 C
0116 C      WRITE THE TITLE
0117 C
0118      EATA = 0.
0119      EATB = 0.
0120      IF (LER) CALL ERASE
0121      IF (LER) CALL HOME
0122      IF (MODE .EQ. 4) GOTO 30
0123      WRITE (LUT, 25) (ALTN (LUO, J), J = 1, 4)
0124 C
0125 C      GET HIGHWALL/BENCH NUMBER OF EDIT
0126 C
0127      30 WRITE(LUT,31) NHRP(LUO)
0128      33 READ(LUT,*) NUMB
0129      IF(NUMB.EQ.0) RETURN
0130      IF(NUMB.GT.0.AND.NUMB.LE.NHRP(LUO)) GOTO 40
0131      WRITE(LUT,32) NHRP(LUO)
0132      GOTO 33
0133 C
0134 C      CALCULATE THE MINIMUM FINAL SLOPE. IF THIS IS THE FIRST
0135 C      PAIR, THERE IS NO NEED TO CHECK BELOW.
0136 C
0137      40 IF (NUMB .EQ. 1) GOTO 50
0138 C
0139 C      FIND OUT HOW MUCH THE SLOPE OF HIGHWALL/BENCH PAIR "NUMB - 1"
0140 C      EATS OUT OF BENCH "NUMB - 1"
0141 C
0142      CALL TSDBR (HWHT (LUO, NUMB - 1), HWSLI (LUO, NUMB - 1),
0143      >          HWSLF (LUO, NUMB - 1), EATB)
0144 C
0145 C      CALCULATE THE AVAILABLE BENCH
0146 C
0147      AVAIL = BENWI (LUO, NUMB-1) - EATB
0148 C
0149 C      CALCULATE THE MINIMUM SLOPE FOR HIGHWALL "NUMB" & BENCH "NUMB -1"
0150 C
0151      CALL TSSCK (AVAIL, HWSLI (LUO, NUMB), HWHT (LUO, NUMB), SLMINB)
0152 C
0153 C      IF THIS IS THE TOP BENCH, THEN THE AVAILABLE BENCH IS THE SAME
0154 C      AS THE INITIAL BENCH WIDTH. OTHERWISE, WE MUST CALCULATE IT.
0155 C
0156      45 IF (NUMB .LT. NHRP (LUO)) GOTO 50
0157      AVAIL = BENWI (LUO, NUMB)
0158      GOTO 60
0159 C
0160 C      CHECK HOW MUCH BENCH THE FINAL SLOPE FOR HIGHWALL "NUMB - 1"
0161 C      EATS OUT OF BENCH "NUMB"
0162 C
0163      50 CALL TSDBR (HWHT (LUO, NUMB + 1), HWSLI (LUO, NUMB + 1),
0164      >          HWSLF (LUO, NUMB + 1), EATA)
0165      AVAIL = BENWI(LUO,NUMB) - EATA
0166 C

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0167 C      CALCULATE THE MINIMUM SLOPE REQUESTABLE, BASED ON HIGHWALL
0168 C      "NUMB" AND BENCH "NUMB"
0169 C
0170      60 CALL TSSCK (AVAIL, HWSLI (LUO, NUMB),
0171      >          HWHT (LUO, NUMB), SLMINA)
0172 C
0173 C      IF THE MINIMUM SLOPE BASED ON THE BENCH BELOW IS NOT LESS THAN
0174 C      THE MINIMUM SLOPE BASED ON BENCH "NUMB", THEN SET SLMINB
0175 C      TO THE MINIMUM SLOPE
0176 C
0177      IF (SLMINA .LT. SLMINB) GOTO 70
0178 C
0179 C      IF THE REVERSE IS TRUE, SET SLMINA TO THE MINIMUM
0180 C
0181      IF (SLMINB .LT. SLMINA) GOTO 80
0182      NUM1 = NUMB - 1
0183      SLOUT=FLOAT(IFIX(SLMINB*100.+01))/100.
0184      WRITE(LUT,61) SLOUT,NUM1,NUMB
0185      GOTO 110
0186      70 NUM1 = NUMB - 1
0187      SLOUT=FLOAT(IFIX(SLMINB*100.+01))/100.
0188      WRITE(LUT,71) SLOUT,NUM1
0189      GOTO 110
0190      80 SLOUT=FLOAT(IFIX(SLMINA*100.+01))/100.
0191      WRITE(LUT,71) SLOUT,NUMB
0192      110 SLMIN=FLOAT(IFIX(AMAX1(SLMINA,SLMINB)*100.+01))/100.
0193      SLMAX=FLOAT(IFIX(AMIN1(19.,HWSLI(LUO,NUMB))*100.))/100.
0194      IF(LUO.EQ.1) SLMAX=FLOAT(IFIX(AMIN1(5.7,HWSLI(LUO,NUMB))*100.))
0195      >/100.
0196      IF(MODE.EQ.4) SLMAX=FLOAT(IFIX(HWSLI(LUO,NUMB)*100.))/100.
0197      IF(SLMAX.GT.SLMIN) GOTO 114
0198      WRITE(LUT,62)
0199      IF(LER) CALL BELL
0200      IF(LER) CALL TINPT(ICHAR)
0201      RETURN
0202      114 WRITE(LUT,111) NUMB
0203      READ(LUT,*) SLPDES
0204      SLPDES=FLOAT(IFIX(SLPDES*100.))/100.
0205      IF(SLPDES.GE.SLMIN.AND.SLPDES.LE.SLMAX) GOTO 120
0206      WRITE(LUT,112) SLMIN,SLMAX
0207      READ(LUT,113) IANS
0208      IF(IANS.EQ.2HYE) 110, 30
0209 C
0210 C      EVERYTHING IS OK --- UPDATE INFORMATION BY CALCULATING
0211 C      HOW MUCH BENCH THIS FINAL SLOPE EATS
0212 C
0213 C
0214      120 CALL TSDBR(HWHT(LUO,NUMB),HWSLI(LUO,NUMB),SLPDES,EAT)
0215 C
0216 C      UPDATE BENCH WIDTHS
0217 C
0218      IF(NUMB.EQ.1) GOTO 125
0219      BENWF(LUO,NUMB-1) = BENWI (LUO,NUMB-1) - EATB - EAT
0220      IF(BENWF(LUO,NUMB-1).LT.0.) GOTO 130
0221      125 BENWF(LUO,NUMB) = BENWI (LUO,NUMB) - EATA - EAT
0222      IF(BENWF(LUO,NUMB).LT.0.) GOTO 130

```



```

0223 C
0224 C      UPDATE FINAL SLOPE AND BRANCH TO 30
0225 C
0226      HWSLF (LUD,NUMB) = SLPDES
0227      GOTO 30
0228 C
0229 C      ADJUST SLPDES TO APPROPRIATE VALUE
0230 C
0231      130 SLPDES=SLPDES+.01
0232      GOTO 120
0233 C
0234 C      FORMAT STATEMENTS
0235 C
0236      25 FORMAT(/,5X,4A2" ALTERNATIVE"//)
0237 C
0238      31 FORMAT(/,5X"WHICH HIGHWALL/BENCH PAIR NUMBER DO YOU WISH"/
0239      *5X"TO CONSIDER ? (ENTER 1 TO 'I2' OR ZERO TO QUIT) -> _")
0240 C
0241      32 FORMAT(/,5X"ERROR -> NUMBER MUST BE BETWEEN 1 AND 'I2' ->_")
0242 C
0243      61 FORMAT(/,5X"MINIMUM SLOPE REQUESTABLE IS 'F5.2' DEGREES"/
0244      *5X"BENCHES 'I2' AND 'I2' WILL BE APPROXIMATELY ZERO.")
0245 C
0246      62 FORMAT(/5X"GRADING TO MAXIMUM PERMISSABLE FINAL SLOPES"/
0247      >      5X"IS NOT GEOMETRICALLY POSSIBLE ON THIS HIGHWALL"/
0248      >      5X"* YOU'LL HAVE TO RE-DEFINE THE MINE PLAN*"/
0249      >/      5X"HIT THE RETURN KEY TO CONTINUE.....")
0250 C
0251      71 FORMAT(/,5X"MINIMUM SLOPE REQUESTABLE IS 'F5.2' DEGREES."/
0252      *5X"BENCH 'I2' WILL BE APPROXIMATELY ZERO.")
0253 C
0254      111 FORMAT(/,5X"FINAL SLOPE FOR HIGHWALL # 'I2' -> _")
0255 C
0256      112 FORMAT(/,5X"ERROR -> SLOPE MUST BE BETWEEN 'F5.2' DEGREES, "/
0257      *5X"AND 'F5.2' DEGREES. TRY AGAIN ? (YES OR NO) -> _")
0258 C
0259      113 FORMAT(A2)
0260 C
0261      END
0262 END$

```



8TSSCK T=00004 IS ON CR00015 USING 00006 BLKS R=0000

```
0001  FTN4
0002      SUBROUTINE TSSCK (AVAIL,SLI,HEIGHT,SLMIN)
0003  C    --- TRUCK AND SHOVEL : SLOPE CHECK ---
0004  C
0005  C LEVEL 5
0006  C
0007  C    THIS ROUTINE CHECKS THE MINIMUM REQUESTABLE SLOPE, BASED ON
0008  C    THE CURRENT HIGHWALL / BENCH DESCRIPTION
0009  C
0010  C THE CALLING SEQUENCE IS :
0011  C
0012  C    CALL TSSCK (AVAIL,SLI,HEIGHT,SLMIN)
0013  C
0014  C WHERE
0015  C
0016  C    AVAIL    -> AVAILABLE BENCH
0017  C    SLI      -> INITIAL HIGHWALL SLOPE
0018  C    HEIGHT   -> HIGHWALL HEIGHT
0019  C    SLMIN    -> MINIMUM SLOPE
0020  C
0021  C LOCAL VARIABLES ARE DEFINED IN THE PROGRAMMER'S MANUAL
0022  C
0023  C THIS ROUTINE WAS WRITTEN BY EASTMAN
0024  C
0025  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0026  C =====
0027  C
0028      RSLI = SLI * .01745
0029      ADJ1 = HEIGHT / TAN (RSLI)
0030      ADJ2 = ADJ1 + (2 * AVAIL)
0031      RSLMIN = ATAN ( HEIGHT / ADJ2 )
0032      SLMIN = RSLMIN / .01745
0033      RETURN
0034      END
0035  END$
```

&TSST T=00004 IS ON CR00015 USING 00032 BLKS R=0000

```
0001  FTN4
0002                SUBROUTINE TSST
0003  C ---TRUCK AND SHOVEL SUMMARY TABLE---
0004  C
0005  C LEVEL 3
0006  C
0007  C      A SUMMARY TABLE OF VOLUMES,COSTS, AND AREA FOR GRADING THE
0008  C      TRUCK AND SHOVEL PRODUCED SPOILS AND REHANDLE VOLUMES AND COSTS
0009  C      ARE PRESENTED ON EITHER THE TERMINAL OR THE LINE PRINTER
0010  C
0011  C THE CALLING SEQUENCE IS :   CALL TSST
0012  C
0013  C
0014  C TSST IS ACCESSED BY TSGE AND SWAPPED IN BY PROGRAM TSSTX
0015  C
0016  C SUBROUTINES SCHEDULED:
0017  C
0018  C      BELL  (TCS)
0019  C      ERASE (TCS)
0020  C      HOME  (TCS)
0021  C      TINFT (TCS)
0022  C      TSVCA (CLAIM)
0023  C
0024  C LOCAL VARIABLES:
0025  C
0026  C      CPAH  -> COST PER ACRE FOR REHANDLE
0027  C      CST   -> GRADING COST ARRAY
0028  C      IANS  -> ANSWER CELL
0029  C      REHTOT -> REHANDLE TOTAL
0030  C      TOTCST -> TOTAL COST
0031  C      TOTVOL -> TOTAL VOLUME
0032  C      VOL   -> VOLUME GRADED ARRAY
0033  C
0034  C THIS ROUTINE WAS WRITTEN BY GREEN
0035  C
0036  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0037  C
0038  C =====
0039  C      TEKTRONIX COMMON
0040  C
0041  C      COMMON ITEK (45)
0042  C
0043  C      LOGICAL UNITS AND COMMON LOCATION
0044  C
0045  C      COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0046  C
0047  C      POINTERS
0048  C
0049  C      COMMON EXIT   ,IANM(3),ICL1(2),IGEN(3),IGRW(5)
0050  C      COMMON IOPTN  ,IOVR(7),IHE      ,ISOC(6),ISUB(8)
0051  C      COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT ,LUO
0052  C      COMMON MODE   ,NANM      ,NCL1      ,NGEN      ,NGRW
0053  C      COMMON NOVR    ,NSECTS    ,NSOC      ,NSUB      ,NSUR
0054  C      COMMON NTOP    ,NU        ,NVEG
```

```

0055 C
0056 C GRADING PARAMETERS
0057 C
0058 COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCPA(5)
0059 COMMON SPCC(5),HWHT(5,10),HWSLI(5,10),NHRP(5),PCEQ19(4)
0060 COMMON BENWF(5,10),REHCPY(5),REHVOL(5),HWSLF(5,10),USR
0061 C
0062 C CATEGORY TEXT
0063 C
0064 COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0065 COMMON OVRBD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0066 COMMON TPSSL(49,13),VGTA(15,13)
0067 C
0068 C EXPECTATION VALUES
0069 C
0070 COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0071 COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0072 COMMON TOPSOI(33,6),VEGETA(10,6)
0073 C
0074 C CATEGORY RESPONSES
0075 C
0076 COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0077 COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0078 COMMON RTOPSO(9),RVEGET(2)
0079 C
0080 C FEAS1,TECON,OPUSE SUBSYSTEM PARAMETERS
0081 C
0082 COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHM
0083 COMMON CABS(2),CAC,CACP,CADF,CADH
0084 COMMON CADIS,CAEAF,CAHSAF,CAHSTS,CAIF
0085 COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0086 COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0087 COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0088 C
0089 INTEGER EXIT,CLMA,GDES,GWHY,OVRBD,SBSL
0090 INTEGER SCEC,SWHY,TPSSL,VGTA,ANIM
0091 INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0092 INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0093 INTEGER VEGETA,ANIMAL
0094 INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0095 INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0096 INTEGER RCLTEC,TTL
0097 C
0098 INTEGER COMMON (1)
0099 EQUIVALENCE (COMMON (1), ITEX (1))
0100 EQUIVALENCE (IARRY (1), LUT)
0101 EQUIVALENCE (IARY2 (1), ISTRK)
0102 EQUIVALENCE (IARY2 (2), ISECT)
0103 EQUIVALENCE (IARY2 (3), ICODE)
0104 EQUIVALENCE (IARY2 (4), LEN)
0105 C
0106 LOGICAL LER
0107 C
0108 C
0109 COMMON /ALTRN/ ALTN
0110 INTEGER ALTN (6, 4)

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0111 C
0112 DIMENSION VOL (10), CST (10)
0113 C
0114 C GET THE VOLUMES AND COSTS
0115 C
0116 CALL TSVCA (VOL, CST, TOTVOL, TOTCST)
0117 IF (IOPTN .EQ. 2) GOTO 300
0118 C
0119 C WRITE HEADINGS
0120 C
0121 IF (LER) CALL ERASE
0122 IF (LER) CALL HOME
0123 WRITE (LUL, 1000)
0124 IF (MODE .NE. 4) GOTO 26
0125 WRITE (LUL, 35)
0126 GOTO 27
0127 26 WRITE (LUL, 30) (ALTN (LUO, J), J=1, 4)
0128 27 WRITE (LUL, 31)
0129 IF (LER) CALL HOME
0130 50 GO TO (51, 52, 53) RGENDE (2)
0131 51 WRITE (LUL, 1001)
0132 GO TO 55
0133 52 WRITE (LUL, 1002)
0134 GO TO 55
0135 53 WRITE (LUL, 1003)
0136 C
0137 55 WRITE (LUL, 1020)
0138 WRITE (LUL, 1010)
0139 WRITE (LUL, 1020)
0140 C
0141 C LOOP THROUGH THE WALL/BENCH PAIRS
0142 C
0143 75 DO 100 I=1, NHPF (LUO)
0144 100 WRITE (LUL, 1030) I, HWSLI (LUO, I), HWSLF (LUO, I),
0145 > BENWI (LUO, I), BENWF (LUO, I), HWHT (LUO, I), BENLEN (LUO, I),
0146 > VOL (I), CST (I)
0147 C
0148 C WRITE TOTALS
0149 C
0150 210 WRITE (LUL, 1020)
0151 WRITE (LUL, 1040) TOTVOL, COGO, TOTCST, AREA (LUO), GCPA (LUO)
0152 C
0153 C IF NOT OPENING CUT, WRITE OUT REHANDLE TOTALS AND GRAND TOTALS
0154 C
0155 300 IF (RGENDE (2).EQ.1) GOTO (230, 250) IOPTN
0156 REHTOT = REHVOL (LUO) * REHCPY (LUO)/100.
0157 C CALCULATE CST PER ACRE FOR REHANDLE
0158 CPAH = REHTOT / AREA (LUO)
0159 TOTCST = TOTCST + REHTOT
0160 C
0161 C CALCULATE GRAND TOTAL COST PER ACRE
0162 C
0163 GCPA (LUO) = TOTCST/AREA (LUO)
0164 IF (IOPTN .EQ. 2) RETURN
0165 C
0166 WRITE (LUL, 1050) REHVOL (LUO), REHCPY (LUO), REHTOT, CPAH,

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0167      *          TOTCST, GCFA (LU0)
0168      230 IF (LUL.NE.LUT) GOTO 250
0169      IF (.NOT.LER) GOTO 250
0170      WRITE (LUT, 1045)
0171      CALL BELL
0172      CALL TINPT (IANS)
0173 C      CALL ERASE
0174      250 CONTINUE
0175      RETURN
0176 C
0177 C      FORMAT STATEMENTS
0178 C
0179      1000 FORMAT (1H1)
0180 C
0181      30 FORMAT (18X'***** "4A2" ALTERNATIVE *****')
0182 C
0183      31 FORMAT (1X"TRUCK & SHOVEL GRADING")
0184 C
0185      35 FORMAT(18X'***** GRADE RUN *****')
0186 C
0187      1001 FORMAT (2/, 51X"OPENING CUT OPTION" )
0188 C
0189      1002 FORMAT (2/, 51X"MINE RUN OPTION" )
0190 C
0191      1003 FORMAT (2/, 51X"FINAL CUT OPTION" )
0192 C
0193      1010 FORMAT (1X"H/B"1X"*HW SLOPES-DEG*"1X
0194      > "BENCHES (FT) * HW HGT *BEN LEN*VOL GRADED*"7X*"/
0195      > 1X"NO. *INITIAL*FINAL*INITIAL* FINAL *"1X
0196      > "(FEET) * (FEET) * (CU YDS) * COST*")
0197 C
0198      1020 FORMAT (1X, 71 (" "))
0199 C
0200      1030 FORMAT (2X, I2, 1X*"F5.2, 2X*"F5.2*"F5.1, 2X
0201      > "*"F5.1, 1X*"F6.1, 2X*"F6.1, 1X*"F9.1, 1X*"F7.2, 1X*")
0202 C
0203      1040 FORMAT (/5X, "TOTAL VOLUME GRADED"7X" : "F12.1" CUBIC YARDS."/
0204      > 5X, "COST PER CU. YD OF GRADING:"8X, F5.1" CENTS."/
0205      > 5X, "TOTAL COST OF GRADING : $"F12.2/
0206      > 5X, "AREA COVERED BY SPOILS : "5X, F8.1" ACRES."/
0207      > 5X, "COST PER ACRE OF GRADING : $"F12.2/)
0208 C
0209      1050 FORMAT (5X, "VOLUME OF REHANDLE"14X" : "F12.1" CUBIC YARDS."/
0210      > 5X, "COST PER CUBIC YARD FOR REHANDLE: "7X, F5.1" CENTS."/
0211      > 5X, "TOTAL COST OF REHANDLE : $"F12.2/
0212      > 5X, "COST PER ACRE FOR REHANDLE : $"F12.2/
0213      > /, 5X, "GRAND TOTAL COST : $"F12.2/
0214      > 5X, "GRAND TOTAL COST PER ACRE : $"F12.2 )
0215 C
0216      1045 FORMAT (/ "HIT RETURN KEY TO ERASE AND CONTINUE... _")
0217 C
0218      END
0219      END$

```



&TSSTP T=00004 IS ON CR00015 USING 00027 BLKS R=0000

```
0001 FTN4
0002 SUBROUTINE TSSTP
0003 C TRUCK AND SHOVEL - SUMMARY TABLE (CALCOMP PLOTTER)
0004 C
0005 C LEVEL 4
0006 C
0007 C TSSTP DISPLAYS A SUMMARY TABLE OF VOLUMES, COSTS, AND
0008 C AREAS FOR THE TRUCK AND SHOVEL MINE. THE TABLE IS EITHER
0009 C PRESENTED ON THE TERMINAL OR THE CALCOMP PLOTTER
0010 C
0011 C THE CALLING SEQUENCE IS : CALL TSSTP
0012 C
0013 C
0014 C TSSTP IS ACCESSED BY TSXST AND SWAPPED IN BY PROGRAM TSSTO
0015 C
0016 C SUBROUTINES SCHEDULED:
0017 C
0018 C ANMOD (TCS)
0019 C DRWAB (TCS)
0020 C MOVAB (TCS)
0021 C TSVCA (CLAIM)
0022 C
0023 C LOCAL VARIABLES:
0024 C
0025 C CST -> COST INCREMENT
0026 C IHGT -> "HEIGHT" OF THE TABLE
0027 C ITCA -> TABLE COMMAND ARRAY
0028 C LUD -> LOGICAL UNIT TO DISPLAY TO
0029 C REHTOT -> REHANDLE TOTALS
0030 C TOTCST -> TOTAL COST
0031 C TOTVOL -> TOTAL VOLUME
0032 C VOL -> VOLUME INCREMENT
0033 C
0034 C THIS ROUTINE WAS WRITTEN BY GREEN
0035 C
0036 C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0037 C
0038 C =====
0039 C
0040 C TEKTRONIX COMMON
0041 C
0042 C COMMON ITEK (45)
0043 C
0044 C LOGICAL UNITS AND COMMON LOCATION
0045 C
0046 C COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0047 C
0048 C POINTERS
0049 C
0050 C COMMON EXIT ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0051 C COMMON IOPTN ,IOVR(7),IHB ,ISOC(6),ISUB(8)
0052 C COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT ,LUO
0053 C COMMON MODE ,NANM ,NCLI ,NGEN ,NGRW
0054 C COMMON NOVR ,NSECTS ,NSOC ,NSUB ,NSUR
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```

0055      COMMON NTOP      ,NU      ,NVEG
0056  C
0057  C      GRADING PARAMETERS
0058  C
0059      COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCFA(5)
0060      COMMON SPCC(5),HWHT(5,10),HWSL1(5,10),NHEP(5),PCEQ19(4)
0061      COMMON BENWF(5,10),REHCPY(5),REHVOL(5),HWSLF(5,10),USR
0062  C
0063  C      CATEGORY TEXT
0064  C
0065      COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0066      COMMON OVRD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0067      COMMON TPSL(49,13),VGTA(15,13)
0068  C
0069  C      EXPECTATION VALUES
0070  C
0071      COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0072      COMMON OVRBD(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0073      COMMON TOPSOI(33,6),VEGETA(10,6)
0074  C
0075  C      CATEGORY RESPONSES
0076  C
0077      COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0078      COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0079      COMMON RTOPSO(9),RVEGET(2)
0080  C
0081  C      FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0082  C
0083      COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHM
0084      COMMON CABS(2),CAC,CACP,CADF,CAIH
0085      COMMON CADS,CAEAF,CAHSAF,CAHSTS,CAIP
0086      COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0087      COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0088      COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0089  C
0090      INTEGER EXIT,CLMA,GDES,GWHY,OVRD,SBSL
0091      INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0092      INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0093      INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0094      INTEGER VEGETA,ANIMAL
0095      INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0096      INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0097      INTEGER RCLTEC,TTL
0098  C
0099      INTEGER COMMON (1)
0100      EQUIVALENCE (COMMON (1), ITEX (1))
0101      EQUIVALENCE (IARY (1), LUT)
0102      EQUIVALENCE (IARY2 (1), ISTRK)
0103      EQUIVALENCE (IARY2 (2), ISECT)
0104      EQUIVALENCE (IARY2 (3), ICODE)
0105      EQUIVALENCE (IARY2 (4), LEN)
0106  C
0107      LOGICAL LER
0108  C
0109  C
0110      DIMENSION VOL (10), CST (10), ITCA (6)

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0111 C
0112 C
0113 C      GET GRADING PARAMETERS AND LOGICAL UNIT
0114 C
0115      LUD = IARRY (3)
0116      AREA (LUD) = 0.
0117      GCFA (LUD) = 0.
0118      CALL TSVCA (VOL, CST, TOTVOL, TOTCST)
0119 C
0120 C      SET HEIGHT OF UPPER TABLE AND REPOSITION
0121 C
0122      IHGT = 20 * NHPF (LUD) + 15
0123      CALL MOVAB ( 10, 565 )
0124 C
0125 C      FILL THE TABLE COMMAND ARRAY
0126 C
0127      ITCA (6) = 60
0128      ITCA (5) = ITCA (6) + 210
0129      ITCA (4) = ITCA (5) + 200
0130      ITCA (3) = ITCA (4) + 110
0131      ITCA (2) = ITCA (3) + 125
0132      ITCA (1) = ITCA (2) + 150
0133 C
0134 C      DRAW THE TABLE
0135 C
0136      CALL DRWAB ( 1000, 565 )
0137      CALL MOVAB ( 1000, 515 )
0138      CALL DRWAB ( 10, 515 )
0139      CALL MOVAB ( 10, 515 - IHGT )
0140      CALL DRWAB ( 1000, 515 - IHGT )
0141      DO 100 I = 2, 6, 2
0142      CALL MOVAB ( ITCA (I-1), 515 - IHGT )
0143      CALL DRWAB ( ITCA (I-1), 565 )
0144      CALL MOVAB ( ITCA (I), 565 )
0145      100 CALL DRWAB ( ITCA (I), 515 - IHGT )
0146 C
0147 C      WRITE IN THE TEXT
0148 C
0149      CALL MOVAB ( 10, 565 )
0150      CALL ANMOD
0151      WRITE ( LUD, 1010 )
0152      1010 FORMAT(/"H/B"2X"HW SLOPES-DEG"2X"BENCHES (FT)"2X,
0153      + "HW HGT"2X"BEN LEN"2X"VOL GRADED"/
0154      + "NO."2X"INITIAL:FINAL"2X"INITIAL:FINAL"2X,
0155      + "(FEET)"3X"(FEET)"3X"(CU YDS)"4X"COST")
0156 C
0157      CALL MOVAB (0, 496)
0158      CALL ANMOD
0159      DO 110 I = 1, NHPF (LUD)
0160      110 WRITE (LUD, 1020) I, HWSLI (LUD, I), HWSLF (LUD, I),
0161      > BENWI (LUD, I), BENWF (LUD, I),
0162      > HWHT (LUD, I), BENLEN (LUD, I),
0163      > VOL (I), CST (I)
0164      1020 FORMAT (1X,I2,2X,F7.1":F6.1,F7.1":F6.1,F7.1,
0165      > F8.1,F12.1,F13.2)
0166 C

```

```

0167      WRITE (LUD,1030) TOTVOL, TOTCST
0168 1030 FORMAT(/42X"TOTALS:"F10.1,F13.2)
0169      REHTOT = REHVOL (LUO) * REHCPY (LUO) / 100.
0170      WRITE (LUD, 1040) REHVOL (LUO), REHCPY (LUO), REHTOT
0171 1040 FORMAT (/2X"REHANDLE VOLUME :F13.2" CUBIC YARDS"/,
0172      >          2X"REHANDLE COST :F13.2" CENTS PER CUBIC YARD"/,
0173      >          2X"REHANDLE TOTAL :F13.2" DOLLARS")
0174      REHTOT = REHTOT / AREA (LUO)
0175      WRITE (LUD, 1050) AREA (LUO), REHTOT, GCPA (LUO)
0176 1050 FORMAT (/2X"AREA COVERED BY GRADED SPOILS :F13.2" ACRES"/,
0177      >          2X"REHANDLE COST PER ACRE :F13.2" DOLLARS"/,
0178      >          2X"GRADING COST PER ACRE :F13.2" DOLLARS")
0179      GCPA (LUO) = GCPA (LUO) + REHTOT
0180      WRITE (LUD, 1060) GCPA (LUO)
0181 1060 FORMAT (2X" ***** GRAND TOTAL COST PER ACRE IS "F13.2" DOLLARS"1X
0182      >"*****")
0183 C
0184 C
0185      RETURN
0186 C
0187      END
0188 END$

```



&TSVCA T=00004 IS ON CRO0015 USING 00037 BLKS R=0291

```
0001  FTN4
0002      SUBROUTINE TSVCA (VOL,CST,TOTVOL,TOTCST)
0003  C   TRUCK AND SHOVEL : VOLUMES, COST, AND AREA
0004  C
0005  C   LEVEL 5
0006  C
0007  C       VOLUME AND COST ARRAYS FOR GRADING THE HIGHWALLS , AS WELL AS
0008  C       TOTAL VOLUME GRADED AND TOTAL COST OF GRADING ARE
0009  C       COMPUTED FOR EITHER SEMI-CIRCULAR OR RECTANGULAR SHAPED SPOILS.
0010  C       IN ADDITION, FINAL GRADED AREA COVERED BY THE SPOILS, AND THE
0011  C       PERCENT OF THE FINAL GRADED AREA EQUAL TO NINETEEN DEGREES
0012  C       ARE DETERMINED.
0013  C
0014  C   TSVCA IS ACCESSED BY TSST AND TSSTP
0015  C
0016  C   THE CALLING SEQUENCE IS :
0017  C
0018  C       CALL TSVCA (VOL, CST, TOTVOL, TOTCST)
0019  C
0020  C   WHERE :
0021  C
0022  C       VOL  -> VOLUMES GRADED ON HIGHWALLS
0023  C       CST  -> COSTS OF GRADING HIGHWALLS
0024  C       TOTVOL -> TOTAL VOLUME GRADED
0025  C       TOTCST -> TOTAL COST OF GRADING
0026  C
0027  C   LOCAL VARIABLES:
0028  C
0029  C       ADOQ  -> ANGLES DEFINED BY BENCH LENGTHS
0030  C       AMPC  -> BASE AREAS OF LOWER HIGHWALLS
0031  C       CP    -> INNER ARC LENGTHS (FINAL)
0032  C       LS    -> INNER ARC LENGTHS (INITIAL)
0033  C       OC    -> INNER RADII OF HIGHWALL/BENCH PAIRS (FINAL)
0034  C       OL    -> INNER RADII OF HIGHWALL/BENCH PAIRS (INITIAL)
0035  C       AB    -> LOWER HIGHWALL WIDTH INCREASES DUE TO GRADING
0036  C       AM    -> OUTER ARC LENGTHS (FINAL)
0037  C       BN    -> OUTER ARC LENGTHS (INITIAL)
0038  C       OA    -> OUTER RADII OF HIGHWALL/BENCH PAIRS (FINAL)
0039  C       OB    -> OUTER RADII OF HIGHWALL/BENCH PAIRS (INITIAL)
0040  C       OD    -> RADII OF BENCHES ALONG THE OUTSIDE EDGE
0041  C       VOLS  -> VOLUMES TO BE SUBTRACTED
0042  C       AE    -> CROSS-SECTIONAL WIDTHS OF FINAL HIGHWALLS
0043  C       BD    -> CROSS - SECTION WIDTHS OF INITIAL HIGHWALLS
0044  C
0045  C   THIS ROUTINE WAS WRITTEN BY GREEN
0046  C
0047  C   ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0048  C   =====
0049  C
0050  C       TEKTRONIX COMMON
0051  C
0052  C       COMMON ITEK (45)
0053  C
0054  C       LOGICAL UNITS AND COMMON LOCATION
```

```

0055 C
0056 COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0057 C
0058 C POINTERS
0059 C
0060 COMMON EXIT ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0061 COMMON IOPTN ,IOVR(7),IHB ,ISOC(6),ISUB(8)
0062 COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT ,LUD
0063 COMMON MODE ,NANM ,NCLI ,NGEN ,NGRW
0064 COMMON NOVR ,NSECTS ,NSOC ,NSUB ,NSUR
0065 COMMON NTOP ,NU ,NVEG
0066 C
0067 C GRADING PARAMETERS
0068 C
0069 COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCFA(5)
0070 COMMON SPCC(5),HWHT(5,10),HWSLI(5,10),NHBP(5),PCEQ19(4)
0071 COMMON BENWF(5,10),REHCPY(5),REHVOL(5),HWSLF(5,10),USR
0072 C
0073 C CATEGORY TEXT
0074 C
0075 COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0076 COMMON OVBD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0077 COMMON TPSL(49,13),VGTA(15,13)
0078 C
0079 C EXPECTATION VALUES
0080 C
0081 COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0082 COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0083 COMMON TOPSOI(33,6),VEGETA(10,6)
0084 C
0085 C CATEGORY RESPONSES
0086 C
0087 COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0088 COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0089 COMMON RTOPSO(9),RVEGET(2)
0090 C
0091 C FEAS1,TECON,OPUSE SUBSYSTEM PARAMETERS
0092 C
0093 COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHM
0094 COMMON CABS(2),CAC,CACP,CADF,CADH
0095 COMMON CADS,CAEAF,CAHSAF,CAHSTS,CAIP
0096 COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0097 COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0098 COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0099 C
0100 INTEGER EXIT,CLMA,GDES,GWHY,OVBD,SBSL
0101 INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0102 INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0103 INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0104 INTEGER VEGETA,ANIMAL
0105 INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0106 INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0107 INTEGER RCLTEC,TTL
0108 C
0109 INTEGER COMMON (1)
0110 EQUIVALENCE (COMMON (1),ITEK (1))

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0111      EQUIVALENCE (IARY (1), LUT)
0112      EQUIVALENCE (IARY2 (1), ISTRK)
0113      EQUIVALENCE (IARY2 (2), ISECT)
0114      EQUIVALENCE (IARY2 (3), ICODE)
0115      EQUIVALENCE (IARY2 (4), LEN)
0116      C
0117      LOGICAL LER
0118      C
0119      C
0120      DIMENSION BD(10), AE(10), AB (10),
0121      >          OB(10), OL(10), OD(10),
0122      >          ADOR(10), EN(10), LS(10),
0123      >          AMPC(10), OA(10), OC(10),
0124      >          AM(10), CF(10), VOL (10),
0125      >          VOL5(10), CST (10), DL(10),
0126      >          AGED(10), AHAD (10), DQ(10),
0127      >          GD(10)
0128      C
0129      REAL LS
0130      C
0131      C      CONVERT COMMON VARIABLES TO NAMES CONSISTENT WITH
0132      C      PROGRAMMERS MANUAL
0133      C
0134      DO 5 I = 1, 10
0135      DL (I) = BENWI (LUO, I)
0136      GD (I) = HWHT(LUO, I)
0137      AGED (I) = HWSLI (LUO, I)
0138      AHAD (I) = HWSLF (LUO, I)
0139      5 DQ (I) = BENLEN (LUO, I)
0140      C
0141      C      PRELIMINARY INFORMATION:
0142      C      1.) X-SECTIONAL WIDTHS OF INITIAL HIGHWALLS
0143      C      2.) X-SECTIONAL WIDTHS OF FINAL HIGHWALLS
0144      C      3.) LOWER HIGHWALL WIDTH INCREASES DUE TO GRADING
0145      C
0146      TOTVOL = 0.
0147      TOTCST = 0.
0148      AREA (LUO) = 0.
0149      GCPA (LUO) = 0.
0150      DO 10 I = 1, NMBF (LUO)
0151      BD (I) = GD (I) / TAN (AGED (I) * .01745)
0152      AE (I) = GD (I) / TAN (AHAD (I) * .01745)
0153      10 AB (I) = (AE (I) - BD (I)) / 2.
0154      C
0155      GOTO (30, 20) IFIX (SPCC (LUO))
0156      C
0157      C      DETERMINE AREA COVERED BY GRADED (RECTANGULAR) SPOILS
0158      C
0159      20 AREA (LUO) = (BD (1) + DL (1) + AB (1))
0160      >          * (DQ (1))
0161      DO 25 I = 2, NMBF (LUO)
0162      25 AREA (LUO) = AREA (LUO) + (BD (I) + DL (I))
0163      >          * (DQ (I))
0164      GOTO 90
0165      C
0166      C      DETERMINE AREA COVERED BY GRADED (SEMI-CIRCULAR) SPOILS

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0167 C
0168 C
0169 C      OUTER AND INNER RADIUS OF HIGHWALL/BENCH PAIR # 1
0170 C
0171 30 OB (1) = AB (1)
0172      DO 35 I = 1, NHEP (LUO)
0173 35 OB (1) = OB (1) + BD (I) + DL (I)
0174      OL (1) = OB (1) - BD (1) - DL (1) - AB (1)
0175 C
0176 C      OUTER AND INNER RADIUS OF HIGHWALL / BENCH PAIR *1*
0177 C
0178      DO 40 I = 2, NHEP (LUO)
0179      OB (I) = OL (I - 1)
0180 40 OL (I) = OB (I) - BD (I) - DL (I)
0181 C
0182 C      RADIUS OF BENCH *1* ALONG OUTSIDE EDGE, ANGLE DEFINED
0183 C      BY THIS BENCH, AND THE OUTER AND INNER ARC LENGTHS
0184 C
0185      DO 50 I = 1, NHEP (LUO)
0186      OB (I) = OL (I) + DL (I)
0187      ADQR (I) = DQ (I) / OB (I)
0188      BN (I) = OB (I) * ADQR (I)
0189 50 LS (I) = OL (I) * ADQR (I)
0190 C
0191 C      FINAL AREA
0192 C
0193      DO 60 I = 1, NHEP (LUO)
0194 60 AREA (LUO) = AREA (LUO) + (OB (I) * BN (I)
0195      >          - OL (I) * LS (I)) / 2.
0196 C
0197 C      CONVERT AREA FROM SQUARE FEET TO ACRES
0198 C
0199 90 AREA (LUO) = AREA (LUO) / 43560.
0200 C
0201 C
0202 C      DETERMINE VOLUME GRADED AND COST FOR GRADING
0203 C
0204 C
0205 C
0206 C      FIRST, DETERMINE BASE AREAS OF LOWER HIGHWALLS
0207 C
0208      GOTO (200, 100)   IFIX (SPCC (LUO))
0209 C
0210 C      RECTANGULAR SPOILS
0211 C
0212 100 DO 150 I = 1, NHEP (LUO)
0213 150 AMPC (I) = (AE (I) / 2.) * DQ (I)
0214      GOTO 500
0215 C
0216 C      SEMI-CIRCULAR SPOILS
0217 C
0218 200 OA (1) = OB (1)
0219      OC (1) = OA (1) - AE (1) / 2.
0220      DO 210 I = 2, NHEP (LUO)
0221      OA (I) = OB (I) + AB (I)
0222 210 OC (I) = OA (I) - AE (I) / 2.

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0223      DO 220 I = 1, NHBP (LUO)
0224      AM (I) = OA (I) * ADOQ (I)
0225      CP (I) = OC (I) * ADOQ (I)
0226      220 AMPC (I) = (OA (I) * AM (I) - OC (I) * CP (I)) / 2.
0227  C
0228  C      DETERMINE VOLUME INCREMENTS
0229  C
0230      500 DO 505 I = 1, NHBP (LUO)
0231      505 VOL (I) = AMPC (I) * GD (I) / 4.
0232  C
0233  C      DETERMINE VOLUME TO BE SUBTRACTED FROM THIS AND SUBTRACT IT
0234  C
0235      IF (IFIX (SPCC (LUO)) .EQ. 1) 507, 515
0236  C
0237  C      SEMI-CIRCULAR SPOILS
0238  C
0239      507 OB (I) = OB (I) - AB (I)
0240      DO 510 I = 1, NHBP (LUO)
0241      510 VOLS (I) = (OB (I) * BN (I) - OC (I) * CP (I)) / 2.
0242      >      * GD (I) / 4.
0243      GOTO 517
0244  C
0245  C      RECTANGULAR SPOILS
0246  C
0247      515 DO 516 I = 1, NHBP (LUO)
0248      516 VOLS (I) = ((BD (I) / 2.) * DQ (I))
0249      >      * GD (I) / 4.
0250  C
0251      517 DO 518 I = 1, NHBP (LUO)
0252      518 VOL (I) = (VOL (I) - VOLS (I)) / 27.
0253  C
0254  C      DETERMINE COST INCREMENTS
0255  C
0256      DO 520 I = 1, NHBP (LUO)
0257      CST (I) = VOL (I) * COGO / 100.
0258      TOTVOL = TOTVOL + VOL (I)
0259      520 TOTCST = TOTCST + CST (I)
0260      GCPA (LUO) = TOTCST / AREA (LUO)
0261  C
0262  C      DETERMINE PERCENT OF FINAL ARE EQUAL TO 19 DEGREES
0263  C
0264      IF (LUO .EQ. 1) RETURN
0265      PCEQ19 (LUO - 1) = 0.
0266      DO 530 I = 1, NHBP (LUO)
0267      IF (AHAD (I) .LT. 19) GOTO 530
0268      PCEQ19 (LUO - 1) = PCEQ19 (LUO - 1) + 2. * AMPC (I)
0269      530 CONTINUE
0270      PCEQ19 (LUO - 1) = PCEQ19 (LUO - 1) / AREA (LUO)
0271      RETURN
0272      END
0273  END4.

```

2TSXBA T=00004 IS ON CR00015 USING 00038 BLKS R=0000

```
0001 FYN4
0002 SUBROUTINE TSXBA
0003 C ---TRUCK AND SHOVEL : CROSS-SECTION OF BENCH ADJUSTMENTS---
0004 C
0005 C LEVEL 4
0006 C
0007 C THIS ROUTINE DISPLAYS A CROSS - SECTIONAL VIEW OF BENCH
0008 C ADJUSTMENTS NEEDED TO ACCOMATE A USER'S SLOPE REQUEST.
0009 C
0010 C TSXBA IS ACCESSED BY TSIFG AND SWAPPED IN BY PROGRAM TSXBX
0011 C
0012 C THE CALLING SEQUENCE IS : CALL TSXBA
0013 C
0014 C SUBROUTINES SCHEDULED:
0015 C
0016 C ANMOD (TCS)
0017 C DASHA (TCS)
0018 C DRAWA (TCS)
0019 C DRWRL (TCS)
0020 C MOVAB (TCS)
0021 C MOVEA (TCS)
0022 C MOVRL (TCS)
0023 C SWNDO (TCS)
0024 C VWNDO (TCS)
0025 C DVN (CLAIM)
0026 C TSELA (CLAIM)
0027 C TSDER (CLAIM)
0028 C
0029 C LOCAL VARIABLES:
0030 C
0031 C ABWBA -> ADJUSTED BENCH WIDTH OF BENCH ABOVE
0032 C ABWBB -> ADJUSTED BENCH WIDTH OF BENCH BELOW
0033 C BMIN -> MINIMUM BENCH WIDTH THAT WILL ACCOMODATE
0034 C THE USER'S SLOPE REQUEST
0035 C CDTR -> CONVERSION : DEGREES TO RADIANS
0036 C IANS -> ANSWER CELL
0037 C IOC -> ORIENTATION CODE (SEE DVN)
0038 C ISC -> SIZE CODE (SEE DVN)
0039 C NDF -> NUMBER OF DECIMAL PLACES (SEE DVN)
0040 C XEXT -> X EXTENT
0041 C XSWFH -> CROSS - SECTIONAL WIDTH OF FINAL HIGHWALL
0042 C XSWIH -> CROSS - SECTIONAL WIDTH OF INITIAL HIGHWALL
0043 C
0044 C THIS ROUTINE WAS WRITTEN BY GREEN
0045 C
0046 C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0047 C
0048 C =====
0049 C
0050 C TEKTRONIX COMMON
0051 C
0052 C COMMON ITEK (45)
0053 C
0054 C LOGICAL UNITS AND COMMON LOCATION
```



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0055 C
0056 COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0057 C
0058 C POINTERS
0059 C
0060 COMMON EXIT ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0061 COMMON IOPTN ,IOVR(7),IHB ,ISOC(6),ISUB(8)
0062 COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT ,LUO
0063 COMMON MODE ,NANM ,NCLI ,NGEN ,NGRW
0064 COMMON NOVR ,NSECTS ,NSOC ,NSUB ,NSUR
0065 COMMON NTOP ,NU ,NVEG
0066 C
0067 C GRADING PARAMETERS
0068 C
0069 COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COBO,GCPA(5)
0070 COMMON SPCC(5),HWHT(5,10),HWSLI(5,10),NHBP(5),PCEQ19(4)
0071 COMMON BENWF(5,10),REHCPY(5),REHVOL(5),HWSLF(5,10),USR
0072 C
0073 C CATEGORY TEXT
0074 C
0075 COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0076 COMMON OVRBD(11,13),SBSL(13), SCEC(33,13),SWHY(44,13)
0077 COMMON TPSEL(49,13),VGTA(15,13)
0078 C
0079 C EXPECTATION VALUES
0080 C
0081 COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0082 COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0083 COMMON TOPSOI(33,6),VEGETA(10,6)
0084 C
0085 C CATEGORY RESPONSES
0086 C
0087 COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0088 COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0089 COMMON RTOPSO(9),RVEGET(2)
0090 C
0091 C FEAS1,TECON,OPUSE SUBSYSTEM PARAMETERS
0092 C
0093 COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHM
0094 COMMON CABS(2),CAC,CACP,CADF,CADH
0095 COMMON CAUS,CAEAF,CAHSAF,CAHSTS,CAIF
0096 COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0097 COMMON CSTRP,FAVG(5),FFSTSP,PFAC,RCLTEC(29,34)
0098 COMMON TCAR(5),THICK(10),THKIS,TTL(40)
0099 C
0100 INTEGER EXIT,CLMA,GDES,GWHY,OVRBD,SBSL
0101 INTEGER SCEC,SWHY,TPSEL,VGTA,ANIM
0102 INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0103 INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0104 INTEGER VEGETA,ANIMAL
0105 INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0106 INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0107 INTEGER RCLTEC,TTL
0108 C
0109 INTEGER COMMON (1)
0110 EQUIVALENCE (COMMON (1), ITEK (1))

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0111      EQUIVALENCE (IARRY (1), LUT)
0112      EQUIVALENCE (IARY2 (1), ISTRK)
0113      EQUIVALENCE (IARY2 (2), ISECT)
0114      EQUIVALENCE (IARY2 (3), ICODE)
0115      EQUIVALENCE (IARY2 (4), LEN)
0116      C
0117      LOGICAL LER
0118      C
0119      C
0120      C      INITIALIZE LOCAL VARIABLES
0121      C
0122      CDTR = 0.01745
0123      ISC = 4
0124      NDP = 2
0125      C
0126      C      WRITE THE TITLE
0127      C
0128      CALL MOVAB (550,730)
0129      CALL ANMOD
0130      WRITE (LUT, 1000)
0131      C
0132      C      DETERMINE THE MINIMUM BENCH WIDTH THAT WILL ACCOMODATE USR
0133      C
0134      CALL TSDER (HWHT (LUO, IHB), HWSLI (LUO,IHB), USR, BMIN)
0135      C
0136      C      ADJUST THE BENCHES LESS THAN BMIN
0137      C
0138      BMIN = BMIN + .01
0139      ABWBA = BENWI (LUO, IHB)
0140      IF (BMIN .GT. BENWI (LUO, IHB)) ABWBA = BMIN
0141      IF (IHB .EQ. 1) ABWBB = ABWBA
0142      IF (IHB .GT. 1) ABWBB = BENWF (LUO, IHB - 1)
0143      IF (BMIN .GT. ABWBB) ABWBB = BMIN
0144      C
0145      C      SET THE WINDOWS
0146      C
0147      100 XSWFH = HWHT (LUO, IHB) / TAN (USR * CDTR)
0148      XSWIH = HWHT (LUO, IHB) / TAN (HWSLI (LUO, IHB) * CDTR)
0149      XEXT = ABWBA + ABWBB + XSWIH
0150      CALL VWNDO (0., XEXT, 0., XEXT / 5.)
0151      IF (HWHT (LUO, IHB) .GT. XEXT / 5.)
0152      .CALL VWNDO (0., XEXT, 0., HWHT (LUO, IHB))
0153      C
0154      C      DRAW THE X-SECTION
0155      C
0156      CALL SWNDO (550, 440, 500, 220)
0157      CALL MOVEA (0., 0.)
0158      IF (IHB .EQ. 1) CALL DASHA (ABWBB - BENWI (LUO, IHB), 0., 54)
0159      IF (IHB .GT. 1) CALL DASHA (ABWBB - BENWF (LUO, IHB - 1), 0., 54)
0160      CALL DRAWA (XEXT - BENWI (LUO, IHB) - XSWIH, 0.)
0161      CALL DRAWA (XEXT - BENWI (LUO, IHB), HWHT (LUO, IHB) )
0162      CALL DRAWA (XEXT, HWHT (LUO, IHB))
0163      CALL DASHA (XEXT, 0., 54)
0164      CALL DASHA (ABWBB, 0., 54)
0165      CALL MOVEA (XEXT - ABWBA - XSWIH, 0.)
0166      CALL DASHA (XEXT - ABWBA, HWHT (LUO, IHB), 54)

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0167      CALL DASHA (XEXT - BENWI (LUO, IHB) , HWHT (LUO, IHB), 54)
0168 C
0169      IF (ABWBA .GT. ABWEB) 110, 120
0170 C
0171      110 CALL MOVEA (0., 0.)
0172      CALL DASHA (XSWFH, HWHT (LUO, IHB), 54)
0173      CALL MOVEA (0., 0.)
0174      GOTO 150
0175 C
0176      120 CALL MOVEA (XEXT, HWHT (LUO, IHB))
0177      CALL DASHA (XEXT - XSWFH, 0., 54)
0178 C
0179 C      LABEL THE USER'S SLOPE REQUEST
0180 C
0181      150 CALL MOVRL(15, 0)
0182      CALL DRWRL (0, 30)
0183      IOC = 3
0184      CALL DVN (USR, ISC, IOC, NDP)
0185      CALL MOVRL (-3, 0)
0186      CALL DRWRL (0, 3)
0187      CALL DRWRL (3, 0)
0188      CALL DRWRL (0, -3)
0189      CALL DRWRL (-3, 0)
0190      CALL MOVEA (0., 0.)
0191 C
0192 C      LABEL LOWER ADJUSTED BENCH (IF NEEDED)
0193 C
0194      IF (IHB .EQ. 1) GOTO 175
0195      IF (ABWEB .EQ. BENWF (LUO, IHB - 1)) GOTO 175
0196      CALL DRWRL (-6, -6)
0197      CALL MOVRL (6, 6)
0198      CALL DRWRL (6, -6)
0199      CALL MOVRL (-6, 6)
0200      CALL DRWRL (0, -15)
0201      CALL MOVRL (-10, -10)
0202      CALL ANMOD
0203      WRITE (LUT, 1010) ABWEB
0204 C
0205 C      LABEL UPPER ADJUSTED BENCH (IF NEEDED)
0206 C
0207      175 IF (ABWBA .EQ. BENWI (LUO, IHB)) GOTO 210
0208      CALL MOVEA (XEXT - ABWBA , HWHT (LUO, IHB))
0209      CALL DRWRL (6, 6)
0210      CALL MOVRL (-6, -6)
0211      CALL DRWRL (-6, 6)
0212      CALL MOVRL (6, -6)
0213      CALL DRWRL (0, 15)
0214      CALL MOVRL (-100, 10)
0215      CALL ANMOD
0216      WRITE (LUT, 1010) ABWBA
0217 C
0218 C      USER OPTION -> USE ADJUSTMENTS ?
0219 C
0220      210 CALL MOVAB (10, 200)
0221      CALL ANMOD
0222      WRITE (LUT, 1020)

```



```

0223      215 READ (LUT,*) IANS
0224      IF (IANS .GE. 1 .AND. IANS .LE. 3) GOTO (220, 240, 230) IANS
0225      WRITE (LUT, 1025)
0226      GOTO 215
0227  C
0228  C      INCREASE BENCH(S) TO SPECIFICATIONS
0229  C
0230      220 IF (SPCC .EQ. 2.) GOTO 225
0231      IF (LER) CALL ERASE
0232      IF (LER) CALL HOME
0233      IPTR = 1
0234      IF (IHB .EQ. 1) GOTO 224
0235      IPTR = 2
0236      BENCH2 = BENWI (LUO, IHB-1) + ABWBB - BENWF (LUO, IHB-1)
0237      224 CALL YSBLA (IPTR, IHB, ABWBA, BENCH2)
0238      225 BENWI (LUO, IHB) = ABWBA
0239      BENWF (LUO, IHB) = ABWBA
0240      IF (IHB .EQ. 1) RETURN
0241      BENWI (LUO, IHB - 1) = BENWI (LUO, IHB - 1) + ABWBB
0242      - BENWF (LUO, IHB - 1)
0243      BENWF (LUO, IHB - 1) = ABWBB
0244      RETURN
0245  C
0246  C      EXIT FROM INPUT MODE
0247  C
0248      230 IHB = 0
0249      240 RETURN
0250  C
0251  C      FORMAT STATEMENTS
0252  C
0253      1000 FORMAT("SUGGESTED BENCH ADJUSTMENT(S)")
0254  C
0255      1010 FORMAT("INCREASE TO "F7.2"/")
0256  C
0257      1020 FORMAT(5X"SUGGESTED BENCH INCREASES FOR GRADING"/
0258      + 5X"THIS HIGHWALL DOWN TO YOUR SLOPE VALUE"/,
0259      + 5X"ARE DISPLAYED IN THE UPPER RIGHT CORNER."//
0260      + 5X" YOU MAY:"/
0261      + 5X" 1 -> IMPLEMENT THE BENCH INCREASES"/,
0262      + 5X" 2 -> RE - ENTER THE FINAL SLOPE"/,
0263      + 5X" 3 -> EXIT FROM THIS ROUTINE"/,
0264      + 5X" INPUT -> _")
0265  C
0266      1025 FORMAT("? RE - INPUT -> _")
0267      END
0268  END$

```

&TSXFS T=00004 IS ON CR00015 USING 00031 BLKS R=0000

```
0001  FTN4
0002                      SUBROUTINE TSXFS
0003  C      ---TRUCK AND SHOVEL : X-SECTION OF FINAL SLOPES---
0004  C
0005  C LEVEL 4
0006  C
0007  C      THIS ROUTINE DISPLAYS A CROSS-SECTIONAL VIEW OF THE FINAL
0008  C      SLOPE VALUE.
0009  C
0010  C TSXFS IS ACCESSED BY TSIFG AND SWAPPED IN THROUGH PROGRAM TSXFX
0011  C
0012  C THE CALLING SEQUENCE IS :      CALL TSXFS
0013  C
0014  C SUBROUTINES SCHEDULED ARE :
0015  C
0016  C      ANMOD   (TCS)
0017  C      BELL    (TCS)
0018  C      DASHA   (TCS)
0019  C      BRAWA   (TCS)
0020  C      DRWRL   (TCS)
0021  C      ERASE   (TCS)
0022  C      NOVAB   (TCS)
0023  C      MOVEA   (TCS)
0024  C      MOVRL   (TCS)
0025  C      SWNDO   (TCS)
0026  C      TINPT   (TCS)
0027  C      VWNDO   (TCS)
0028  C
0029  C THE LOCAL VARIABLES ARE :
0030  C
0031  C      BENR     -> BENCH REMOVED
0032  C      CDTR     -> CONVERSION: DEGREES TO RADIANS
0033  C      FTWBB    -> FINAL TERRACE WIDTH OF BENCH BELOW
0034  C      ICHAR    -> TINPT CELL
0035  C      IOC      -> ORIENTATION CODE (SEE DVN)
0036  C      ISC      -> SIZE CODE (SEE DVN)
0037  C      ITWBB    -> INITIAL TERRACE WIDTH OF BENCH BELOW
0038  C      NDP      -> NUMBER OF DECIMAL PLACES (SEE DVN)
0039  C      NLB      -> NUMBER OF LOWER BENCH
0040  C      XEXT     -> X EXTENT
0041  C      XSWFH    -> CROSS-SECTIONAL WIDTH OF FINAL HIGHWALL
0042  C      XSWIH    -> CROSS-SECTIONAL WIDTH OF INITIAL HIGHWALL
0043  C
0044  C THIS ROUTINE WAS WRITTEN BY GREEN
0045  C
0046  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0047  C
0048  C =====
0049  C
0050  C      TEKTRONIX COMMON
0051  C
0052  C      COMMON ITEK (45)
0053  C
0054  C      LOGICAL UNITS AND COMMON LOCATION
```

```

0055 C
0056 COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0057 C
0058 C POINTERS
0059 C
0060 COMMON EXIT ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0061 COMMON IOPTN ,IOVR(7),IHE ,ISOC(6),ISUB(8)
0062 COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT ,LUO
0063 COMMON MODE ,NANM ,NCLI ,NGEN ,NGRW
0064 COMMON NOVR ,NSECTS ,NSOC ,NSUB ,NSUR
0065 COMMON NTOP ,NU ,NVEG
0066 C
0067 C GRADING PARAMETERS
0068 C
0069 COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGD,GCPA(5)
0070 COMMON SFCC(5),HWHT(5,10),HWSLI(5,10),NHBP(5),PCER19(4)
0071 COMMON BENWF(5,10),REHCFY(5),REHVOL(5),HWSLF(5,10),USR
0072 C
0073 C CATEGORY TEXT
0074 C
0075 COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0076 COMMON OVRBD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0077 COMMON TPBL(49,13),VGTA(15,13)
0078 C
0079 C EXPECTATION VALUES
0080 C
0081 COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0082 COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0083 COMMON TOPSOI(33,6),VEGETA(10,6)
0084 C
0085 C CATEGORY RESPONSES
0086 C
0087 COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0088 COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0089 COMMON RTOPSO(9),RVEGET(2)
0090 C
0091 C FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0092 C
0093 COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHM
0094 COMMON CABS(2),CAC,CACP,CADF,CADH
0095 COMMON CADS,CAEAF,CAHSAF,CAHSTS,CAIP
0096 COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0097 COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0098 COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0099 C
0100 INTEGER EXIT,CLMA,GDES,GWHY,OVRBD,SBSL
0101 INTEGER SCEC,SWHY,TPBL,VGTA,ANIM
0102 INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0103 INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0104 INTEGER VEGETA,ANIMAL
0105 INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0106 INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0107 INTEGER RCLTEC,TTL
0108 C
0109 INTEGER COMMON (1)
0110 EQUIVALENCE (COMMON (1), ITEX (1))

```



```

0111      EQUIVALENCE (IARY (1), LUT)
0112      EQUIVALENCE (IARY2 (1), ISTRK)
0113      EQUIVALENCE (IARY2 (2), ISECT)
0114      EQUIVALENCE (IARY2 (3), ICODE)
0115      EQUIVALENCE (IARY2 (4), LEN)
0116      C
0117      LOGICAL LER
0118      REAL ITWBB
0119      C
0120      C      INITIALIZE LOCAL VARIABLES
0121      C
0122      CDTR = 0.01745
0123      ISC = 4
0124      NDP = 2
0125      NLB = IHB - 1
0126      C
0127      C      WRITE THE TITLE
0128      C
0129      CALL MOVAB (550, 730)
0130      CALL ANMOD
0131      WRITE (LUT, 1000)
0132      C
0133      C      SET THE WINDOWS
0134      C
0135      CALL TSDBR (HWHT (LUO, IHB), HWSLI (LUO, IHB),
0136      *          HWSLF (LUO, IHB), BENR)
0137      XSWIH = HWHT (LUO, IHB) / TAN (HWSLI (LUO, IHB) * CDTR)
0138      XSWFH = HWHT (LUO, IHB) / TAN (HWSLF (LUO, IHB) * CDTR)
0139      IF (IHB .EQ. 1) ITWBB = BENWI (LUO, IHB)
0140      IF (IHB .GT. 1) ITWBB = BENWF (LUO, IHB - 1) + BENR
0141      XEXT = ITWBB + XSWIH + BENWI (LUO, IHB)
0142      IF (IHB .EQ. 1) FTWBB = BENWF (LUO, IHB)
0143      IF (IHB .GT. 1) FTWBB = BENWF (LUO, IHB - 1)
0144      CALL VWNDO (0., XEXT, -20., XEXT / 5.)
0145      C
0146      IF (HWHT (LUO, IHB) + 30. .GE. XEXT / 5.)
0147      *CALL VWNDO (0., XEXT, -20., HWHT (LUO, IHB) + 30.)
0148      CALL SWNDO (550, 440, 500, 220)
0149      C
0150      C      DRAW INITIAL DATA
0151      C
0152      CALL MOVEA (0., 0.)
0153      CALL DASHA (ITWBB, 0., 54)
0154      CALL DASHA (ITWBB + XSWIH, HWHT (LUO, IHB), 54)
0155      CALL DASHA (XEXT, HWHT (LUO, IHB), 54)
0156      CALL DASHA (XEXT, 0., 54)
0157      CALL DASHA (XEXT - XSWIH - BENWI (LUO, IHB), 0., 54)
0158      C
0159      C      DRAW FINAL DATA
0160      C
0161      CALL MOVEA (0., 0.)
0162      CALL DRAWA (FTWBB, 0.)
0163      CALL DRAWA (FTWBB + XSWFH, HWHT (LUO, IHB))
0164      CALL DRAWA (XEXT, HWHT (LUO, IHB))
0165      CALL MOVEA (FTWBB, 0.)
0166      C

```

```

0167 C LABEL THE FINAL SLOPE VALUE
0168 C
0169 CALL MOVRL (15, 0)
0170 CALL DRWRL (0, 20)
0171 IOC = 3
0172 CALL DYN (HWSLF (LUD, IHB), ISC, IOC, NDF)
0173 CALL MOVRL (-3, 0)
0174 CALL DRWRL (0, 3)
0175 CALL DRWRL (3, 0)
0176 CALL DRWRL (0, -3)
0177 CALL DRWRL (-3, 0)
0178 C
0179 C LABEL THE INITIAL SLOPE
0180 C
0181 CALL MOVEA (XEXT - XSWIH - BENWI (LUD, IHB), 0.)
0182 CALL MOVRL (15, 10)
0183 IOC = 1
0184 CALL DYN (HWSLI (LUD, IHB), ISC, IOC, NDF)
0185 CALL MOVRL (3, 0)
0186 CALL DRWRL (0, 3)
0187 CALL DRWRL (3, 0)
0188 CALL DRWRL (0, -3)
0189 CALL DRWRL (-3, 0)
0190 C
0191 C LABEL THE TERRACES
0192 C
0193 IF (IHB .EQ. 1) GOTO 10
0194 CALL MOVEA (0., 0.)
0195 CALL DRWRL (-6, -6)
0196 CALL MOVRL (6, 6)
0197 CALL DRWRL (6, -6)
0198 CALL MOVRL (-6, 6)
0199 CALL DRWRL (0, -20)
0200 CALL MOVRL (-20, -15)
0201 CALL ANMOD
0202 WRITE (LUT, 1010) NLB, FTWBB
0203 10 CALL MOVEA (XEXT, HWHT (LUD, IHB))
0204 CALL DRWRL (6, 6)
0205 CALL MOVRL (-6, -6)
0206 CALL DRWRL (-6, 6)
0207 CALL MOVRL (6, -6)
0208 CALL DRWRL (0, 20)
0209 CALL MOVRL (-370, 10)
0210 CALL ANMOD
0211 WRITE (LUT, 1010) IHB, BENWF (LUD, IHB)
0212 C
0213 C DONE. LET USER INSPECT THE SCREEN, THEN RETURN
0214 C
0215 CALL MOVAB (20, 20)
0216 CALL BELL
0217 CALL ANMOD
0218 WRITE (LUT, 1020)
0219 CALL TINT (1CHAR)
0220 CALL ERASE
0221 RETURN
0222 C

```

```
0223 C      FORMAT STATEMENTS
0224 C
0225      1000 FORMAT("FINAL SLOPE VALUE")
0226 C
0227      1010 FORMAT("TERRACE # "I2" WIDTH IS "F5.2"/")
0228 C
0229      1020 FORMAT("HIT RETURN KEY TO ERASE AND CONTINUE.....")
0230 C
0231      END
0232 END$
```



&TSXST T=00004 IS ON CR00015 USING 00033 BLKS R=0000

```
0001  FTH4
0002                SUBROUTINE TSXST
0003  C      TRUCK AND SHOVEL * X - SECTIONAL VIEW AND SUMMARY TABLE
0004  C
0005  C LEVEL 3
0006  C
0007  C
0008  C      TSXST DISPLAYS A CROSS-SECTIONAL VIEW OF THE INITIAL
0009  C      AND FINAL DATA ON EITHER THE CRT OR THE CALCOMP PLOTTER
0010  C      AND SCHEDULES A SUMMARY DATA TABLE DISPLAY
0011  C
0012  C THE CALLING SEQUENCE IS : CALL TSXST
0013  C
0014  C TSXST IS ACCESSED BY TSGE AND SWAPPED IN BY PROGRAM TSXSX
0015  C
0016  C SUBROUTINES SCHEDULED:
0017  C
0018  C      ANMOD (TCS)
0019  C      DASHA (TCS)
0020  C      DRAWA (TCS)
0021  C      DVN   (CLAIM)
0022  C      FINIT (TCS)
0023  C      GETLU (SYS)
0024  C      HOME  (TCS)
0025  C      INITY (TCS)
0026  C      MOVEA (TCS)
0027  C      MOVRL (TCS)
0028  C      SETPM (SYS)
0029  C      SWND0 (TCS)
0030  C      TSSTP (CLAIM)
0031  C      VMND0 (TCS)
0032  C
0033  C LOCAL VARIABLES :
0034  C
0035  C      CDTR  -> CONVERSION - DEGREES TO RADIANS
0036  C      IANS  -> ANSWER CELL
0037  C      IFLAG ->
0038  C      LUD   -> LOGICAL UNIT FOR DISPLAY
0039  C      SIZE  -> SIZE OF PLOTTER COPY
0040  C      XEXT  -> X-EXTENT OF DRAWING
0041  C      XFDT  -> X FINAL DATA TABLE
0042  C      XIDT  -> X INITIAL DATA TABLE
0043  C      XMAX  -> MAXIMUM X VALUE
0044  C      YEXT  -> Y EXTENT OF DRAWING
0045  C
0046  C
0047  C THIS ROUTINE WAS WRITTEN BY GREEN
0048  C
0049  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0050  C
0051  C =====
0052  C      TEKTRONIX COMMON
0053  C
0054  C      COMMON ITER (45)
```

```

0055 C
0056 C LOGICAL UNITS AND COMMON LOCATION
0057 C
0058 COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0059 C
0060 C POINTERS
0061 C
0062 COMMON EXIT ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0063 COMMON IOPTN ,IOVR(7),IHE ,ISOC(6),ISUB(8)
0064 COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT ,LUO
0065 COMMON MODE ,NANM ,NCLI ,NGEN ,NGRW
0066 COMMON NOVR ,NSECTS ,NSOC ,NSUB ,NSUR
0067 COMMON NTOP ,NU ,NVEG
0068 C
0069 C GRADING PARAMETERS
0070 C
0071 COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COGO,GCPA(5)
0072 COMMON SPCC(5),HWHT(5,10),HWSLI(5,10),NHBP(5),FCEQ19(4)
0073 COMMON BENWF(5,10),REHCPY(5),REHVOL(5),HWSLF(5,10),USR
0074 C
0075 C CATEGORY TEXT
0076 C
0077 COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0078 COMMON OVRBD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0079 COMMON TPSL(49,13),VGTA(15,13)
0080 C
0081 C EXPECTATION VALUES
0082 C
0083 COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0084 COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0085 COMMON TOPSOI(33,6),VEGETA(10,6)
0086 C
0087 C CATEGORY RESPONSES
0088 C
0089 COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0090 COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0091 COMMON RTOPSO(9),RVEGET(2)
0092 C
0093 C FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0094 C
0095 COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CABHM
0096 COMMON CABS(2),CAC,CACP,CADF,CADH
0097 COMMON CADS,CAEAF,CAHSAF,CAHSTS,CAIF
0098 COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0099 COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0100 COMMON TCAR(5),THICK(10),THKYS,TTL(40)
0101 C
0102 INTEGER EXIT,CLMA,GDES,GWHY,OVRBD,SBSL
0103 INTEGER SCEC,SWHY,TPSL,VGTA,ANIM
0104 INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0105 INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0106 INTEGER VEGETA,ANIMAL
0107 INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0108 INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0109 INTEGER RCLTEC,TTL
0110 C

```

```

0111      INTEGER COMMON (1)
0112      EQUIVALENCE (COMMON (1), ITEX (1))
0113      EQUIVALENCE (IARRY (1), LUT)
0114      EQUIVALENCE (IARY2 (1), ISTRK)
0115      EQUIVALENCE (IARY2 (2), ISECT)
0116      EQUIVALENCE (IARY2 (3), ICODE)
0117      EQUIVALENCE (IARY2 (4), LEN)
0118  C
0119      LOGICAL LER
0120  C
0121      INTEGER ALTN(6,4)
0122      COMMON / ALTRN / ALTN
0123      DIMENSION XIDT(21), YIDT(11), XFDT(11)
0124  C
0125      CDTR = 0.01745
0126      IANS = 2H
0127      LUB = LUT
0128      IARRY (3) = LUB
0129  C
0130  C      INITIALIZE AND SET WINDOWS
0131  C
0132      CALL INITT (LUT)
0133      5 XMAX= BENWI (LUB,1)
0134      YMAX = 0.
0135      DO 10 I = 1, NHEP (LUB)
0136      XMAX = XMAX + HWHT (LUB,I) / TAN ( HWSLI (LUB,I) * CDTR ) +
0137      +      BENWI (LUB,1)
0138      10 YMAX = YMAX + HWHT (LUB,I)
0139      XEXT = XMAX + 40.
0140      YEXT = YMAX + 20.
0141      CALL UWNDO (0.,XEXT,-20.,YEXT)
0142      CALL SWNDO (10,1000,575,205)
0143  C
0144  C      WRITE THE TITLE
0145  C
0146      CALL HOME
0147      CALL ANMOD
0148      IF(MODE.NE.4)WRITE (LUB,1000) (ALTN (LUB,J),J=1,4)
0149      IF (MODE.EQ.4) WRITE (LUB,1001)
0150      1001 FORMAT(1X'CROSS SECTION OF SPOILS'/
0151      >1X'DASHED LINE -> INITIAL H/B DATA')
0152      1000 FORMAT(1X'X-SECTION OF SPOILS FOR '4A2, /
0153      + 1X'DASHED LINE -> INITIAL H/B DATA')
0154  C
0155  C      FILL X INITIAL DATA TABLE
0156  C
0157      XIDT (1) = BENWI (LUB,1)
0158      DO 15 I = 1, NHEP (LUB)
0159      XIDT (I * 2) = XIDT (I * 2 - 1) + HWHT (LUB,I) /
0160      *      TAN ( HWSLI (LUB,I) * CDTR )
0161      15 XIDT (I * 2 + 1) = XIDT (I * 2) + BENWI (LUB,1)
0162  C
0163  C      FILL Y INITIAL DATA TABLE
0164  C
0165      YIDT (1) = 0.
0166      DO 20 I = 1, NHEP (LUB)

```



```

0167      20 YIDT (I + 1) = YIDT (I) + HWHT (LUD,I)
0168 C
0169 C      FILL X FINAL DATA TABLE
0170 C
0171      XFDT (1) = XIDT (1) -
0172      .      ( HWHT (LUD,1) / TAN ( HWSLF (LUD,1) * CDTR ) -
0173      .      HWHT (LUD,1) / TAN ( HWSLI (LUD,1) * CDTR ) ) / 2.
0174      XFDT (2) = XFDT (1) + HWHT (LUD,1) / TAN (HWSLF (LUD,1) * CDTR)
0175      DO 30 I = 2, NHEF (LUD)
0176      30 XFDT (I + 1) = XFDT (I) + BENWF (LUD,I - 1) +
0177      +      HWHT (LUD,I) / TAN ( HWSLF (LUD,I) * CDTR )
0178 C
0179 C      DRAW THE INITIAL DATA (DASHED LINE)
0180 C
0181      CALL MOVEA ( XIDT (1), 0. )
0182      DO 40 I = 1, NHEF (LUD)
0183      CALL DASHA ( XIDT (I * 2), YIDT (I + 1), 54 )
0184      40 CALL DASHA ( XIDT (I * 2 + 1), YIDT (I + 1), 54 )
0185 C
0186      CALL DASHA ( XMAX, 0. )
0187      CALL DASHA ( BENWF (LUD,1), 0. )
0188      CALL DASHA ( XFDT (1), 0. )
0189 C
0190 C      DRAW THE FINAL DATA (SOLID LINE)
0191 C
0192      DO 50 I = 2, NHEF (LUD) + 1
0193      CALL DRAWA ( XFDT (I), YIDT (I) )
0194      50 CALL DRAWA ( XFDT (I) + BENWF (LUD,I - 1), YIDT (I) )
0195 C
0196 C      LABEL THE DRAWING
0197 C
0198      DO 60 I = 2, NHEF (LUD) + 1
0199      CALL MOVEA (XFDT (I), YIDT (I))
0200      IF (I .EQ. NHEF (LUD) + 1)
0201      >CALL MOVEA (XFDT (I) - (BENWI (LUD,I-1) / 2.), YMAX)
0202      CALL MOVRL (0, 15)
0203      IF (I .EQ. NHEF (LUD) + 1) CALL MOVRL (-10, -50)
0204      J = I - 1
0205      CALL ANMOD
0206      60 WRITE (LUD, 1010) J
0207      1010 FORMAT (I2)
0208 C
0209 C      LABEL TOTALS
0210 C
0211      CALL MOVEA ( XFDT(1), 0. )
0212      CALL DRAWA ( XFDT (1), -20. )
0213      CALL MOVEA ( XFDT (1), -10. )
0214      CALL DRAWA ( XMAX/2., -10. )
0215 C
0216 C      TOTAL WIDTH
0217 C
0218      CALL DVN ( XMAX - XIDT(1) + XFDT(1), 4, 1, 2 )
0219      CALL DRAWA ( XMAX, -10. )
0220      CALL MOVEA ( XMAX, -20. )
0221      CALL DRAWA ( XMAX, 0. )
0222 C

```

```

0223 C      TOTAL HEIGHT
0224 C
0225      CALL MOVEA ( XMAX, YMAX / 2.)
0226      CALL DRAWA (XMAX + 10., YMAX / 2.)
0227      CALL MOVRL (5, -15)
0228      CALL DYN ( YMAX, 4, 3, 2 )
0229 C
0230 C      DONE WITH THE X-SECTION. NOW DISPLAY THE SUMMARY TABLE
0231 C
0232      CALL TSSTF
0233      IF (IANS .NE. 2H ) GOTO 9000
0234      WRITE (LUT, 1020)
0235 1020 FORMAT(2X"PLOTTER COPY ? (YES OR NO) -> _")
0236      READ (LUT, 1030) IANS
0237 1030 FORMAT (A2)
0238      IF (IANS .NE. 2HYE) GOTO 9000
0239      WRITE (LUT, 1040)
0240 1040 FORMAT (2X"PLOT SIZE IN INCHES ALONG X AXIS -> _")
0241      READ (LUT, *) SIZE
0242      IFLAG = 2
0243      CALL SETPM (SIZE, IFLAG)
0244      CALL INITT (LUT)
0245      CALL GETLU (LUD)
0246      IARRY (3) = LUD
0247      GOTO 5
0248 9000 CALL FINTT (0.,0.)
0249      RETURN
0250      END
0251 END*

```

&VEGET T=00004 IS ON CR00015 USING 00039 BLKS R=0000

```
0001  FTN4
0002                      SUBROUTINE VEGET
0003  C      FULL DISPLAY--CATEGORY B / VEGETATION
0004  C
0005  C LEVEL 2
0006  C
0007  C VEGET IS ACCESSED BY EIFD TO SCHEDULE INPUTS AND EDITS TO
0008  C CATEGORY RESPONSES, AND EDITS TO THE EXPECTATION OF SUCCESS
0009  C VALUES FOR CATEGORY B - VEGETATION, USING FULL DISPLAY
0010  C
0011  C THE CALLING SEQUENCE IS :      CALL VEGET
0012  C
0013  C VEGET USES THE TCS ROUTINES :  ERASE AND HOME
0014  C
0015  C THE LOCAL VARIABLES ARE :
0016  C
0017  C      IANS  -> ANSWER CELL
0018  C      II    -> "I" INDEX [ (I,J) ] TO VEGETA ARRAY
0019  C      IOLB  -> PRE-EDIT CATEGORY RESPONSE VALUE
0020  C      LUDRN -> LAND USE OPTION REFERENCE NUMBER
0021  C              1-> CROPLAND
0022  C              2-> NATIVE VEGETATION
0023  C              3-> WILDLIFE
0024  C              4-> WATER RECREATION
0025  C              5-> HIGH USE
0026  C              6-> OTHER
0027  C      NN    -> HEADING NUMBER
0028  C
0029  C VEGET IS SWAPPED IN BY PROGRAM VEGEX
0030  C
0031  C THIS ROUTINE WAS WRITTEN BY GREEN
0032  C
0033  C ***** CLAIM RELEASE 1.0 - APRIL 1, 1980 *****
0034  C =====
0035  C
0036  C      TEKTRONIX COMMON
0037  C
0038  C      COMMON ITEX (45)
0039  C
0040  C      LOGICAL UNITS AND COMMON LOCATION
0041  C
0042  C      COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0043  C
0044  C      POINTERS
0045  C
0046  C      COMMON EXIT      ,IANM(3),ICLI(2),IGEN(3),IGRW(5)
0047  C      COMMON IOPTHN    ,IOVR(7),IPNTR ,ISDC(6),ISUB(8)
0048  C      COMMON ISUR(6),ITOP(9),IVEG(2),LEXIT ,LUD
0049  C      COMMON MODE      ,NANH ,NCLI ,NGEN ,NGRW
0050  C      COMMON NOVR      ,NSECTS ,NSDC ,NSUB ,NSUR
0051  C      COMMON NTOP      ,NU ,NVEG
0052  C
0053  C      GRABING PARAMETERS
0054  C
```



```

0055      COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COSO,GCFA(5)
0056      COMMON GRDVBS(5),HWHY(5,10),HWSLI(5,10),NSPP(5),PCEQ19(4)
0057      COMMON PERCNT(5,10),REHCFY(5),REHVOL(5),SLOPE(5,10),WBP
0058      C
0059      C      CATEGORY TEXT
0060      C
0061      COMMON ANIM(23,13),CLMA(13,13),GDES(15,13),GWHY(22,13)
0062      COMMON OVRBD(11,13),SBSL(13),SCEC(33,13),SWHY(44,13)
0063      COMMON TPSL(49,13),VBTA(15,13)
0064      C
0065      C      EXPECTATION VALUES
0066      C
0067      COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYD(19,6)
0068      COMMON OVRBDN(28,6),SOCECN(29,6),SUBSOI(30,6),SURHYD(23,6)
0069      COMMON TOPSOI(33,6),VEGETA(10,6)
0070      C
0071      C      CATEGORY RESPONSES
0072      C
0073      COMMON RANIMA(3),RCLIMA(2),RGENDE(3),RGRWHY(5)
0074      COMMON ROVRBD(7,10),RSOCEC(6),RSUBSO(8),RSURHY(6)
0075      COMMON RTOPSO(9),RVEGET(2)
0076      C
0077      C      FEASI,TECON,OPUSE SUBSYSTEM PARAMETERS
0078      C
0079      COMMON CAAHM,CABAH,CABFN(3),CABFP(3),CANBM
0080      COMMON CABS(2),CAC,CACF,CADF,CADH
0081      COMMON CADS,CAEAF,CAHSAF,CAHSTS,CAIF
0082      COMMON CAR3FC,CASF,CASNC,CSTES,CSTRM
0083      COMMON CSTRP,FAVG(5),PFSTSP,PFAC,RCLTEC(29,34)
0084      COMMON TCAR(5),THICK(10),THKTS,TTL(40)
0085      C
0086      INTEGER EXIT,CLMA,GDES,GWHY,OVRBD,SBSL
0087      INTEGER SCEC,SWHY,TPSL,VBTA,ANIM
0088      INTEGER CLIMAT,GENDES,GRWHYD,OVRBDN
0089      INTEGER SOCECN,SUBSOI,SURHYD,TOPSOI
0090      INTEGER VEGETA,ANIMAL
0091      INTEGER RCLIMA,RGENDE,RGRWHY,ROVRBD,RSOCEC
0092      INTEGER RSUBSO,RSURHY,RTOPSO,RVEGET,RANIMA
0093      INTEGER RCLTEC,TTL
0094      C
0095      INTEGER COMMON (1)
0096      EQUIVALENCE (COMMON (1), ITEK (1))
0097      EQUIVALENCE (IARY1 (1), LUT)
0098      EQUIVALENCE (IARY2 (1), ISTRK)
0099      EQUIVALENCE (IARY2 (2), ISECT)
0100      EQUIVALENCE (IARY2 (3), ICODE)
0101      EQUIVALENCE (IARY2 (4), LEN)
0102      C
0103      LOGICAL LER
0104      C
0105      C      DISPLAY MODE
0106      1      IF (.NOT.LER) GOTO 5
0107      CALL ERASE
0108      CALL HOME
0109      5      GOTO (10,20,30) MODE
0110      10      WRITE (LUT,1010)

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```

0111      GOTO 40
0112      20 WRITE (LUT,2010)
0113      GOTO 40
0114      30 WRITE (LUT,3010)
0115      40 IF ( MODE.GT.1) GOTO 50
0116      GOTO (100,200) LEXIT
0117 C      USER INPUT -> EDIT HEADING
0118      50 WRITE (LUT,2020)
0119      51 READ (LUT,2030) IANS
0120      IF (IANS.EQ.2HA ) GOTO 100
0121      IF (IANS.EQ.2HB ) GOTO 200
0122      IF (IANS.EQ.2HNO) RETURN
0123      WRITE (LUT,1200)
0124      GOTO 51
0125 C      EDIT EXPECTATIONS
0126 C      USER INPUT -> SUBHEADING NUMBER
0127      52 WRITE (LUT,3020)
0128      57 READ (LUT,*) II
0129      GOTO 85
0130 C      USER INPUT -> LAND USE OPTION REFERENCE NUMBER
0131      53 WRITE (LUT,3030)
0132      54 READ (LUT,*) LUORN
0133      IF (LUORN.GE.1.AND.LUORN.LE.6) GOTO 56
0134      WRITE (LUT,1200)
0135      GOTO 54
0136      56 II = II + L
0137 C      USER INPUT -> EXPECTATION VALUE
0138      58 WRITE (LUT,3040)
0139      59 READ (LUT,*) VEGETA (II,LUORN)
0140      IF (VEGETA (II,LUORN).GE.0.AND.VEGETA (II,LUORN).LE.4)
0141      + GOTO 600
0142      WRITE (LUT,3050)
0143      GOTO 59
0144 C      EDIT RESPONSES
0145      60 IOLD = RVEGET (NN)
0146      65 WRITE (LUT,2040) IOLD
0147      GOTO 83
0148 C      INPUT RESPONSES
0149 C      USER INPUT -> RVEGET (NN)
0150      70 WRITE (LUT,2000)
0151      83 READ (LUT,*) RVEGET (NN)
0152      IF (RVEGET (NN).EQ.0) GOTO (900,87) MODE
0153      II = RVEGET (NN)
0154      85 IF (II.GE.1.AND.II.LE.IVEG (NN)) GOTO (700,600,53) MODE
0155      87 WRITE (LUT,1200)
0156      GOTO (83,83,57) MODE
0157 C      DISPLAY HEADING A -> PRIMARY PLANT TYPE
0158      100 NN = 1
0159      J = 1
0160      L = 0
0161      IF(MODE.NE.1.AND.LER) CALL ERASE
0162      IF(MODE.NE.1.AND.LER) CALL HOME
0163      105 WRITE (LUT,1000) (VBTA (1,1),I = 1,13)
0164      WRITE (LUT,1020)
0165      WRITE (LUT,1050) ( (VBTA (K,1),I = 1,13),K = 2,4)
0166      WRITE (LUT,1100) (VBTA (5,1),I = 1,13), (VEGETA (J,1),I = 1,13)

```

```

0167      WRITE (LUT,1050)  ( (VGTA (K,I),I = 1,13),K = 6,7)
0168      J = J + 1
0169      DO 110 K = 8,10
0170      WRITE (LUT,1100)  (VGTA (K,I),I = 1,13),  (VEGETA (J,I),I = 1,6)
0171 110 J = J + 1
0172      WRITE (LUT,1050)  ( (VGTA (K,I),I = 1,13),K = 11,12)
0173      WRITE (LUT,1100)  (VGTA (13,I),I = 1,13),  (VEGETA (J,I),I = 1,6)
0174      GOTO (70,60,52) MODE
0175 C      DISPLAY HEADING B -> SECONDARY TYPES
0176      200 NN = 2
0177      J = IVEG (1) + 1
0178      L = J - 1
0179      IF (.NOT.LER) GOTO 205
0180      CALL ERASE
0181      CALL HOME
0182      WRITE (LUT,1000)  (VGTA (1,I),I = 1,13)
0183 205 WRITE (LUT,1020)
0184      WRITE (LUT,1050)  (VGTA (14,I),I = 1,13)
0185      WRITE (LUT,1050)  (VGTA (4,I),I = 1,13)
0186      WRITE (LUT,1100)  (VGTA (5,I),I = 1,13), (VEGETA (J,I),I = 1,6)
0187      WRITE (LUT,1050)  ( (VGTA (K,I),I = 1,13),K = 6,7)
0188      J = J + 1
0189      DO 210 K = 8,10
0190      WRITE (LUT,1100)  (VGTA (K,I),I = 1,13),  (VEGETA (J,I),I = 1,6)
0191 210 J = J + 1
0192      WRITE (LUT,1100)  (VGTA (15,I),I = 1,13),  (VEGETA (J,I),I = 1,6)
0193      GOTO (70,60,52) MODE
0194 C      USER INPUT -> MORE EDITS ?
0195      600 WRITE (LUT,3060)
0196      READ (LUT,2030) IANS
0197      IF (IANS.NE.2HYES) RETURN
0198      GOTO 1
0199 C      INPUT MODE -> DIRECT TO PROPER HEADING
0200      700 IF (NN.EQ.NVEG) RETURN
0201      GOTO 200
0202 C      USER WANTS OUT -> SET EXIT TO ZERO AND RETURN
0203      900 EXIT = 0
0204      RETURN
0205 C      FORMAT STATEMENTS
0206      1000 FORMAT ( 13A2,44 ("*"),/,26X,"*",
0207      210X,"STANDARD EXPECTATIONS",11X,"*",/,
0208      226X,44 ("*"),/,26X,"*CROP*",2X,
0209      2"NATIVE",2X,"*WILD*",2X,"WATER",3X,
0210      2"*HIGH*OTHER*",/,26X,
0211      2"*LAND*VEGETATION*LIFE*RECREATION*USE *",5X,"*")
0212 C
0213      1020 FORMAT (70 ("*"),/,26X,"*"4X"*"10X"*"4X"*"10X"*"4X"*"5X"*")
0214 C
0215      1050 FORMAT (13A2,"*",4X,"*",10X,"*",4X,"*",
0216      210X,"*",4X,"*",5X,"*")
0217 C
0218      1100 FORMAT (13A2,
0219      2"* "11" * "11" * "11" * "11" * "11" * "11" *)
0220 C
0221      1200 FORMAT (/ "YOU HAVE TYPED IN AN ILLEGAL ANSWER.",
0222      2"/ "GIVE HER ANOTHER SPOT -> _")

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0223 C
0224 2000 FORMAT (*ENTER THE APPROPRIATE*,5X,
0225      &44 ("*"),/, "NUMBER, OR ZERO TO QUIT -> _")
0226 C
0227 1010 FORMAT ( 17X"INPUT RESPONSES/VEGETATION"//)
0228 C
0229 2010 FORMAT ( 17X"EDIT RESPONSES/VEGETATION"//)
0230 C
0231 3010 FORMAT ( - 17X"EDIT EXPECTATIONS/VEGETATION"//)
0232 C
0233 2020 FORMAT ( 5X"IN WHICH HEADING IS YOUR DESIRED EDIT ?"/,
0234      &5X" (ENTER A,B, OR NONE ) -> _")
0235 C
0236 2030 FORMAT (A2)
0237 C
0238 2040 FORMAT ( 5X"YOUR CURRENT RESPONSE IS ->"I1,/,
0239      &5X"ENTER YOUR NEW RESPONSE HERE -> _")
0240 C
0241 3020 FORMAT ( 5X"IN WHICH SUB-HEADING IS THE EXPECTATION VALUE"/,
0242      &5X"YOU WISH TO CHANGE ? (ENTER THE APPROPRIATE NUMBER) -> _")
0243 C
0244 3030 FORMAT(/5X"SELECT THE LAND USE OPTION YOU WISH TO CHANGE"/
0245      > 1X" -1- / -2- / -3- / -4- / -5- / -6- /"/
0246      > 1X"CROPLAND/NAT.VEG./WILDLIFE/WAT.REC./HIGH USE/ OTHER/"
0247      >/5X"ENTER YOUR SELECTION HERE -> _")
0248 C
0249 3040 FORMAT ( 5X"ENTER YOUR NEW EXPECTATION VALUE HERE -> _")
0250 C
0251 3050 FORMAT (/, 5X"ERROR--> YOUR EXPECTATION VALUE MUST BE"/,
0252      &5X"0,1,2,3, OR 4 TO AVOID INTRODUCING A BIAS -> _")
0253 C
0254 3060 FORMAT ( 5X"ANY MORE EDITS TO VEGETATION ?"/,
0255      &5X" (YES OR NO) -> _")
0256 C
0257 C
0258 END
0259 END#

```

CCFTS T=00004 IS ON CR00015 USING 00008 BLKS R=0000

0001	170.00	COST PER ACRE TO APPLY HAY MULCH
0002	2.750	COST PER ACRE TO BUY/APPLY HERBICIDE
0003	9.000	COST PER ACRE TO BUY FERTILIZER : N ("LOW")
0004	4.000	COST PER ACRE TO BUY FERTILIZER : N ("MED")
0005	1.000	COST PER ACRE TO BUY FERTILIZER : N ("HIGH")
0006	7.000	COST PER ACRE TO BUY FERTILIZER : P ("LOW")
0007	3.000	COST PER ACRE TO BUY FERTILIZER : P ("MED")
0008	.750	COST PER ACRE TO BUY FERTILIZER : P ("HIGH")
0009	170.00	COST PER ACRE TO BUY HAY MULCH
0010	4.000	COST PER ACRE TO BUY SEED (CROPLAND)
0011	91.650	COST PER ACRE TO BUY SEED (NVEG, WILFE, WREC, HUSE)
0012	15.000	COST PER ACRE FOR CHAINING
0013	10.500	COST PER ACRE TO CHISEL PLOW
0014	1.000	COST PER ACRE TO DRILL FERTILIZER
0015	3.750	COST PER ACRE TO DISC AND HARROW
0016	3.750	COST PER ACRE TO DRILL SEED
0017	40.000	COST PER ACRE TO ERECT ANIMAL FENCING
0018	400.00	COST PER ACRE TO HYDROMULCH SEED AND FERTILIZER
0019	150.00	COST PER ACRE TO HAND PLANT SHRUB AND TREE SEEDLINGS
0020	33.000	COST PER ACRE TO IRRIGATE PLANTINGS
0021	450.00	COST PER ACRE TO RIP THREE FOOT CENTERS
0022	16.500	COST PER ACRE FOR SNOW FENCING
0023	6.750	COST PER ACRE TO SEED NURSE CROP
0024	10.000	PERCENTAGE FOR STABILIZATION OF TOPSOIL STORAGE FILE
0025	15.000	PERCENTAGE FOR ADMINISTRATION COSTS

DLRSDT T=00004 IS ON CR00015 USING 00001 DLKS R=0000

0001	00
0002	03
0003	02
0004	02
0005	00
0006	50.0
0007	25.0
0008	25.0
0009	50.0
0010	50.0
0011	75.0
0012	25.0
0013	11.5
0014	15.0
0015	19.0
0016	11.5
0017	19.0
0018	11.5
0019	19.0



BLRSPM T=00004 IC ON CR00015 USING 00002 BLKS R=0000

0001	02
0002	04
0003	04
0004	04
0005	03
0006	50.0
0007	50.0
0008	25.0
0009	25.0
0010	25.0
0011	25.0
0012	10.0
0013	25.0
0014	40.0
0015	25.0
0016	25.0
0017	25.0
0018	40.0
0019	10.0
0020	50.0
0021	25.0
0022	25.0
0023	5.7
0024	5.7
0025	11.5
0026	17.0
0027	5.7
0028	11.5
0029	17.0
0030	5.7
0031	11.5
0032	17.0
0033	5.7
0034	11.5

0001	10	** NOECTS **
0002	03020303	** NCEN --- ICEN **
0003	020404	** NCLI --- ICLI **
0004	07040306030205040303	** NTOP --- ITOP **
0005	000406030205040303	** NCUB --- ICUB **
0006	0704070205040303	** NCUR --- ICUR **
0007	06040503030404	** NCUR --- ISUR **
0008	050405040402	** NCRW --- ICRW **
0009	020505	** NVEG --- IVEG **
0010	03060502	** NWIL --- IWIL **
0011	06020606030505	** NSOC --- ISOC **

0012 01A1222220 \*\*\* GENDES \*\*\* \*\*\*\*\* STANDARD EXPECTATIO

0013 01A2222220 \*\*\*  
 0014 01B11112110 \*\*\*  
 0015 01B2222220 \*\*\*  
 0016 01B31113310 \*\*\*  
 0017 01C1322230 \*\*\*  
 0018 01C2232320 \*\*\*  
 0019 01C3023210 \*\*\*

-----> 1) GENERAL DESCRIPTION

0020 02A11111110 \*\*\* CLIMAT \*\*\*  
 0021 02A2122120 \*\*\*  
 0022 02A3232220 \*\*\*  
 0023 02A4333320 \*\*\*  
 0024 02B1333330 \*\*\*  
 0025 02B2222220 \*\*\*  
 0026 02B31112220 \*\*\*  
 0027 02B41111110 \*\*\*

-----> 2) CLIMATOLOGY

0028 03A11111110 \*\*\* TOPSOI \*\*\*  
 0029 03A2222220 \*\*\*  
 0030 03A3233220 \*\*\*  
 0031 03A4333220 \*\*\*  
 0032 03B11111120 \*\*\*  
 0033 03B2222220 \*\*\*  
 0034 03B3333320 \*\*\*  
 0035 03C11111110 \*\*\*  
 0036 03C2222220 \*\*\*  
 0037 03C3333320 \*\*\*  
 0038 03C4222220 \*\*\*  
 0039 03C5122220 \*\*\*  
 0040 03C61111110 \*\*\*  
 0041 03B11111120 \*\*\*  
 0042 03B2222220 \*\*\*

-----> 3) TOPSOIL

0043 03B3333320 \*\*\*  
 0044 03E1222220 \*\*\*  
 0045 03E21111110 \*\*\*  
 0046 03F1333330 \*\*\*  
 0047 03F2222220 \*\*\*  
 0048 03F3122220 \*\*\*  
 0049 03F41111120 \*\*\*  
 0050 03F50111110 \*\*\*  
 0051 03E1333330 \*\*\*  
 0052 03C2222220 \*\*\*  
 0053 03C31111120 \*\*\*  
 0054 03D41111110 \*\*\*

0055	03H1111120	***	---	---	***
0056	03H2222220	***	---	---	***
0057	03H3333320	***	---	---	***
0058	03I1111120	***	---	---	***
0059	03I2222220	***	---	---	***
0060	03I3333320	***	---	---	***
0061	04A1111120	***	SUBSOI	---	***
0062	04A2222220	***	---	---	***
0063	04A3233220	***	---	---	***
0064	04A4333220	***	---	---	***
0065	04B1111110	***	---	---	***
0066	04B2222220	***	---	---	***
0067	04B3333320	***	---	---	***
0068	04B4222220	***	---	---	***
0069	04B5122220	***	---	---	***
0070	04B6111110	***	---	---	***
0071	04C1111120	***	---	---	***
0072	04C2222220	***	---	---	***
0073	04C3333220	***	---	---	***
0074	04D1222220	***	---	---	***
0075	04D2111120	***	---	---	***
0076	04E1333330	***	---	---	***
0077	04E2222220	***	---	---	***
0078	04E3122220	***	---	---	***
0079	04E4122220	***	---	---	***
0080	04E5111110	***	---	---	***
0081	04F1333330	***	---	---	***
0082	04F2222220	***	---	---	***
0083	04F3122220	***	---	---	***
0084	04F4111110	***	---	---	***
0085	04G1111220	***	---	---	***
0086	04G2222220	***	---	---	***
0087	04G3333220	***	---	---	***
0088	04H1111220	***	---	---	***
0089	04H2222220	***	---	---	***
0090	04H3333220	***	---	---	***
0091	05A1322230	***	OVERBEN	---	***
0092	05A2233220	***	---	---	***
0093	05A3122220	***	---	---	***
0094	05A4111110	***	---	---	***
0095	05C1111110	***	---	---	***
0096	05C2222220	***	---	---	***
0097	05C3333320	***	---	---	***
0098	05C4222220	***	---	---	***
0099	05C5112220	***	---	---	***
0100	05C6111110	***	---	---	***
0101	05C7111230	***	---	---	***
0102	05D1222220	***	---	---	***
0103	05D2111120	***	---	---	***
0104	05E1333330	***	---	---	***
0105	05E2222220	***	---	---	***
0106	05E3122220	***	---	---	***
0107	05E4112220	***	---	---	***
0108	05E5111220	***	---	---	***
0109	05F1333320	***	---	---	***
0110	05F2222220	***	---	---	***

-----> 4) SUBSOIL

-----> 5) OVERBURDEN



0111	05F3122220	**	---	---	**
0112	05F4111110	**	---	---	**
0113	05G11111220	**	---	---	**
0114	05G2222220	**	---	---	**
0115	05G3333220	**	---	---	**
0116	05H11111220	**	---	---	**
0117	05H2222220	**	---	---	**
0118	05H3333220	**	---	---	**
0119	06A1233310	**	SURHYD		**
0120	06A2333310	**	---	---	**
0121	06A3222220	**	---	---	**
0122	06A4111130	**	---	---	**
0123	06B1111110	**	---	---	**
0124	06B2122120	**	---	---	**
0125	06B3222120	**	---	---	**
0126	06B4332220	**	---	---	**
0127	06B5333310	**	---	---	**
0128	06C1321130	**	---	---	**
0129	06C2233320	**	---	---	**
0130	06C3113210	**	---	---	**
0131	06D1111130	**	---	---	**
0132	06D2322220	**	---	---	**
0133	06D3233310	**	---	---	**
0134	06E1333330	**	---	---	**
0135	06E2222220	**	---	---	**
0136	06E3122220	**	---	---	**
0137	06E4111110	**	---	---	**
0138	06F1333330	**	---	---	**
0139	06F2222220	**	---	---	**
0140	06F3122120	**	---	---	**
0141	06F4111110	**	---	---	**
0142	07A1123310	**	GRWHD		**
0143	07A2332210	**	---	---	**
0144	07A3222220	**	---	---	**
0145	07A4111130	**	---	---	**
0146	07B1111110	**	---	---	**
0147	07B2122120	**	---	---	**
0148	07B3222120	**	---	---	**
0149	07B4322220	**	---	---	**
0150	07B5322320	**	---	---	**
0151	07C1333330	**	---	---	**
0152	07C2222220	**	---	---	**
0153	07C3122220	**	---	---	**
0154	07C4111110	**	---	---	**
0155	07D1333330	**	---	---	**
0156	07D2222220	**	---	---	**
0157	07D3122120	**	---	---	**
0158	07D4111110	**	---	---	**
0159	07E1333330	**	---	---	**
0160	07E2222220	**	---	---	**
0161	08A1322120	**	VEGETA		**
0162	08A2233220	**	---	---	**
0163	08A3133220	**	---	---	**
0164	08A4233310	**	---	---	**
0165	08A5341130	**	---	---	**
0166	08B1221120	**	---	---	**

-----> 6) SURFACE WATER HYDROLOGY

-----> 7) GROUND WATER HYDROLOGY

-----> 8) VEGETATION

0167	08B2233220	**	---	---	**
0168	08B3133220	**	---	---	**
0169	08B4233310	**	---	---	**
0170	08B5222220	**	---	---	**
0171	09A1133210	**	WILDLF		**
0172	09A2233210	**	---	---	**
0173	09A3223310	**	---	---	**
0174	09A4233210	**	---	---	**
0175	09A5114100	**	---	---	**
0176	09A6321220	**	---	---	**
0177	09B1133210	**	---	---	**
0178	09B2233210	**	---	---	**
0179	09B3223310	**	---	---	**
0180	09B4233210	**	---	---	**
0181	09B5321220	**	---	---	**
0182	09C1222220	**	---	---	**
0183	09C2222220	**	---	---	**
0184	10A1122130	**	COCLCN		**
0185	10A2222220	**	---	---	**
0186	10B1411000	**	---	---	**
0187	10B2322210	**	---	---	**
0188	10B3232210	**	---	---	**
0189	10B4233310	**	---	---	**
0190	10B5122320	**	---	---	**
0191	10B6211130	**	---	---	**
0192	10C1322210	**	---	---	**
0193	10C2232210	**	---	---	**
0194	10C3233310	**	---	---	**
0195	10C4122320	**	---	---	**
0196	10C5211130	**	---	---	**
0197	10C6222220	**	---	---	**
0198	10D1322210	**	---	---	**
0199	10D2232210	**	---	---	**
0200	10D3233310	**	---	---	**
0201	10D4122320	**	---	---	**
0202	10D5211130	**	---	---	**
0203	10E1322210	**	---	---	**
0204	10E2232210	**	---	---	**
0205	10E3233310	**	---	---	**
0206	10E4122320	**	---	---	**
0207	10E5211130	**	---	---	**
0208	10F1322210	**	---	---	**
0209	10F2232210	**	---	---	**
0210	10F3233310	**	---	---	**
0211	10F4122320	**	---	---	**
0212	10F5211130	**	---	---	**
0213	***** END OF FILE	*****			*****

-----> 9) ANIMALS

-----> 10) SOCIO-ECONOMICS

MLT T=00004 IS ON CRO0015 USING 00005 BLKS R=0000

0001	(A1)	1.	STRIP ALL TOPSOIL
0002	(A2)	2.	RESREAD ALL TOPSOIL
0003	(B1)	3.	STRIP 1 FOOT OF SUBSOIL
0004	(B2)	4.	RESREAD 1 FOOT OF SUBSOIL
0005	(B3)	5.	STRIP 2 FT OF SUBSOIL (OR TOP/SUB BLEND)
0006	(B4)	6.	RESREAD 2 FT OF (OR TOP/SUB BLEND)
0007	(C1)	7.	REHANDLE LITHOLOGIC UNIT #
0008	(C2)	8.	REHANDLE 2 FT. OF SEEDBED SUITABLE SPOIL
0009	(C3)	9.	GRADE SPOIL
0010	(C4)	10.	RIP 3 FOOT CENTERS
0011	(D1)	11.	CHISEL PLOW
0012	(D2)	12.	DISC AND HARROW
0013	(D3)	13.	CHAINING
0014	(E1)	14.	BUY SEED
0015	(E2)	15.	DRILL SEED
0016	(E3A)	16.	BUY FERTILIZER : NITROGEN
0017	(E3B)	17.	BUY FERTILIZER : PHOSPHATE
0018	(E4)	18.	DRILL FERTILIZER
0019	(E5)	19.	BUY HAY MULCH
0020	(E6)	20.	APPLY HAY MULCH
0021	(E7)	21.	HYDROMULCH SEED AND FERTILIZER
0022	(E8)	22.	HAND PLANT SHRUB AND TREE SEEDLINGS
0023	(F1)	23.	BUY,APPLY HERBICIDE
0024	(F2)	24.	ERECT ANIMAL FENCING
0025	(G1)	25.	SNOW FENCING
0026	(G2)	26.	SEED "NURSE" CROP
0027	(G3)	27.	IRRIGATE PLANTINGS
0028	(H1)	28.	STABILIZE TOPSOIL STORAGE PILE
0029	(I1)	29.	ADMIN. OF OPERATIONS AND NECESSARY TESTS,BOND, AND PERMIT FEES



TEXTED Y=00004 IS ON CRO0015 USING 00023 BLKS R=00000

```

0001 1 I.) GENERAL DESCRIPTION:
0002 2 A.) TYPE OF MINE :
0003 3 1.) DRAGLINE
0004 4 2.) TRUCK AND SHOVEL
0005 5 B.) STAGE IN MINING
0006 6 SEQUENCE :
0007 7 1.) OPENING BOX CUT
0008 8 2.) MINE RUN
0009 9 3.) FINAL BOX CUT
0010 10 C.) AVERAGE SLOPE OF
0011 11 10 RANDOM POINTS
0012 12 IN THE AREA :
0013 13 1.) 0.00 - 3.00
0014 14 2.) 3.01 - 5.70
0015 15 3.) 5.71 - 11.50
0016 1 11.) CLIMATOLOGY :
0017 2 A.) AVERAGE TOTAL ANNUAL
0018 3 PRECIPITATION (IN)
0019 4 1.) 5.0-10.0
0020 5 2.) 10.1-15.0
0021 6 3.) 15.1-20.0
0022 7 4.) 20.1-25.0
0023 8 B.) AVERAGE ANNUAL WIND
0024 9 VELOCITY (MPH)
0025 10 1.) 0.0-5.0
0026 11 2.) 5.1-10.0
0027 12 3.) 10.1-15.0
0028 13 4.) 15.1-
0029 1 III.) TOPSOIL :
0030 2 A.) THICKNESS (INCHES) :
0031 3 1.) 0.0-5.9
0032 4 2.) 6.0-11.9
0033 5 3.) 12.0-23.9
0034 6 4.) 24.0-
0035 7 D.) PERCENT ORGANIC
0036 8 MATTER :
0037 9 1.) 0.0-0.9
0038 10 2.) 1.0-1.9
0039 11 3.) 2.0-
0040 12 C.) TEXTURE :
0041 13 1.) SANDY
0042 14 2.) SANDY LOAM
0043 15 3.) LOAM
0044 16 4.) SILT LOAM
0045 17 5.) CLAY LOAM
0046 18 6.) CLAY
0047 19 E.) STRUCTURE (AFTER
0048 20 REDISTRIBUTION) :
0049 21 1.) WEAK : 0.0-25.0
0050 22 2.) MODERATE : 25.1-50.0
0051 23 3.) STRONG : 50.1-
0052 24 F.) MOIST BULK DENSITY
0053 25 AFTER RELOTT. (G/CC)
0054 26 1. 1.00-1.50

```

0055 27 2.) 1.51 4  
0056 28 F.) SALINITY (MMHOS/CM) :  
0057 29 1.) 0.0-2.0  
0058 30 2.) 2.1-4.0  
0059 31 3.) 4.1-5.0  
0060 32 4.) 5.1-15.0  
0061 33 5.) 15.1 1  
0062 34 G.) SODIUM ADSORPTION  
0063 35 RATIO (MEQ/L) :  
0064 36 1.) 0.0 - 4.9  
0065 37 2.) 5.0 - 9.9  
0066 38 3.) 10.0-14.9  
0067 39 4.) 15.0 1  
0068 40 H.) AVAILABLE NITROGEN  
0069 41 (NH4HNO3) (PPM) :  
0070 42 1.) 0.0 - 2.9 "LOW"  
0071 43 2.) 3.0 - 9.9 "MED"  
0072 44 3.) 10.0 4 "HIGH"  
0073 45 I.) AVAILABLE PHOSPHORUS  
0074 46 (PPM) :  
0075 47 1.) 0.0 -50.0 "LOW"  
0076 48 2.) 50.1 75.0 "MED"  
0077 49 3.) 75.1 1 "HIGH"  
0078 1 IV.) SUBSOIL :  
0079 1 V.) OVERBURDEN :  
0080 2 A.) NUMBER OF ROCKS OVER  
0081 3 12" (ANY DIMENSION):  
0082 4 1.) 0 - 10  
0083 5 2.) 11 100  
0084 6 3.) 101 -1000  
0085 7 4.) 1001 4  
0086 8 C.) TEXTURE OF EACH UNIT  
0087 9 AFTER MINING AND  
0088 10 WEATHERING 1 YEAR  
0089 11 7.) CONSOLIDATED (ROCK)  
0090 1 VI.) SURFACE WATER  
0091 2 HYDROLOGY  
0092 3 A.) MOST RELIABLE TYPE  
0093 4 OF SURFACE WATER  
0094 5 PRESENT :  
0095 6 1.) PERENNIAL LAKE OR  
0096 7 POND  
0097 8 2.) PERENNIAL STREAM  
0098 9 3.) INTERMIT. STREAM  
0099 10 4.) EPHEMERAL STREAM  
0100 11 B.) AMOUNT OF SURPLUS  
0101 12 OFC. WATER LEGALLY  
0102 13 & PHYSICALLY AVAIL-  
0103 14 ABLE FOR APPROPRIAT-  
0104 15 ION AND IRRIGATION  
0105 16 DURING APRIL-SEPT.  
0106 17 (ACRE FEET OF WATER  
0107 18 PER ACRE TO BE  
0108 19 RECLAIMED) :  
0109 20 1.) 0.00 0.10  
0110 21 2.) 0.11-0.20

0111 22 3.) 0.26-0.50  
 0112 23 4.) 0.51-1.00  
 0113 24 5.) 1.10 +  
 0114 25 C.) IND. OF DISSEC.(FT/A)  
 0115 26 1.) 00.0 - 50.0  
 0116 27 2.) 50.1 - 100.0  
 0117 28 3.) 100.1 +  
 0118 29 D.) IND. OF MEAND.(FT/A)  
 0119 30 1.) 00.0 - 25.0  
 0120 31 2.) 25.1 - 50.0  
 0121 32 3.) 50.1 +  
 0122 33 E.) SALINITY (MICROMHOS/  
 0123 34 CM) :  
 0124 35 1.) 0 - 250  
 0125 36 2.) 251 - 750  
 0126 37 3.) 751 -2250  
 0127 38 4.) 2251 +  
 0128 39 F.) SODIUM ADSORPTION  
 0129 40 RATIO (MEQ/L) :  
 0130 41 1.) 0.0 - 10  
 0131 42 2.) 10.1-18.0  
 0132 43 3.) 18.1-26.0  
 0133 44 4.) 26.1 +  
 0134 1 VII.) GROUND WATER  
 0135 2 HYDROLOGY :  
 0136 3 A.) AVERAGE DEPTH TO  
 0137 4 HIGHEST WATER  
 0138 5 TABLE (FEET) :  
 0139 6 1.) 0 - 5  
 0140 7 2.) 6 -15  
 0141 8 3.) 16 - 50  
 0142 9 4.) 51 +  
 0143 10 B.) AMOUNT OF GROUND  
 0144 11 WATER LEGALLY AND  
 0145 12 PHYSICALLY AVAIL-  
 0146 13 ABLE FOR APPROPRIA-  
 0147 14 TION AND IRRIGATION  
 0148 15 DATING APRIL SEPT.  
 0149 16 (ACRE FEET OF WATER  
 0150 17 PER ACRE TO BE  
 0151 18 RECLAIMED ) :  
 0152 19 C.) MINOR ALLUVIAL  
 0153 20 VALLEY FLOOR  
 0154 21 1.) PRESENT  
 0155 22 2.) ABSENT  
 0156 1 VIII.) VEGETATION :  
 0157 2 A.) CURRENT MOST IMP.  
 0158 3 COMMUNITY TYPE  
 0159 4 1.) CROPLAND (CEREAL  
 0160 5 GRAINS AND HAYLAND)  
 0161 6 2.) IMPROVED RANGE  
 0162 7 (INTERSEEDED WITH  
 0163 8 EXOTIC SPECIES)  
 0164 9 3.) NATIVE RANGELAND  
 0165 10 4.) NAT. RIPARIAN VEG.  
 0166 11 5.) UNDEVELOPED OR



0167 12 ENDANGERED PLANT  
 0168 13 SPECIES PRESENT  
 0169 14 B.) 2ND IMPORT TYPES  
 0170 15 5.) NONE PRESENT  
 0171 1 1X.) ANIMALS :  
 0172 2 A.) CURRENT MOST IMPORT.  
 0173 3 WILDL. TYPES PRESENT  
 0174 4 1.) HARVESTABLE BIG GAME  
 0175 5 MAMMALS  
 0176 6 2.) HARVESTABLE UPLAND  
 0177 7 BIRDS AND MAMMALS  
 0178 8 3.) HARVESTABLE WETLANDS  
 0179 9 BIRDS AND MAMMALS  
 0180 10 4.) PRESENCE OF LOCALLY  
 0181 11 IMPORTANT AND DIVERSE  
 0182 12 NON-GAME BIRDS AND/OR  
 0183 13 MAMMALS  
 0184 14 5) PRES. OF THREATENED  
 0185 15 OR ENDANGERED SPECIES  
 0186 16 C.) LIVESTOCK GRAZING ON  
 0187 17 ADJOINING LANDS :  
 0188 18 1.) PRESENT  
 0189 19 2.) ABSENT  
 0190 20 B.) CURRENT 2ND. IMPORT.  
 0191 21 WILDL. TYPES PRESENT  
 0192 22 6.) ABUNDANT WILDLIFE  
 0193 23 TYPES ARE ABSENT  
 0194 1 X.) SOCIO-ECONOMICS :  
 0195 2 A.) IMPT. ARCHAEOLOGIC,  
 0196 3 HISTORIC, SCIENTIFIC  
 0197 4 SITES TO BE PRESERVED  
 0198 5 1.) PRESENT  
 0199 6 2.) ABSENT  
 0200 7 B.) PRIMARY LAND USE  
 0201 8 DUR. LAST 10 YRS.  
 0202 9 1.) "PRIME" AGRICULTURAL  
 0203 10 LAND  
 0204 11 2.) CROPLAND  
 0205 12 3.) LIVESTOCK GRAZING  
 0206 13 4.) WILDLIFE HABITAT  
 0207 14 5.) WATER ORIENTATED  
 0208 15 RECREATION  
 0209 16 6.) HOMES, BUSINESS, ROADS  
 0210 17 C.) 2ND USUAL LAND USE  
 0211 18 1.) CROPLAND  
 0212 19 2.) LIVESTOCK GRAZING  
 0213 20 3.) WILDLIFE HABITAT  
 0214 21 4.) WATER-BASED REC.  
 0215 22 5.) HOMES, BUSINESS, ROADS  
 0216 23 6.) NO SECONDARY USE  
 0217 24 D.) FUTURE LAND USE DESIRE  
 0218 25 OF POST MINING SURFACE  
 0219 26 OWNER  
 0220 27 E.) FUTURE LAND USE  
 0221 28 DESIRE OF LOCAL  
 0222 29 COMMUNITY :

0223	30	F.) FUTURE LAND-USE
0224	31	DESIRES OF
0225	32	GOVT. REGULATORY
0226	33	AGENCIES

TSRFS T=00004 IS ON CRO0015 USING 00002 BLKS R=0000

0001	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
0002	0.0	11.5	19.0	0.0	11.5	19.0	0.0	11.5	19.0	0.0
0003	11.5	19.0	5.7	11.5	19.0	5.7	11.5	19.0	5.7	11.5
0004	0.0	11.5	5.7	0.0	11.5	5.7	0.0	11.5	5.7	0.0
0005	5.7	0.0	11.5	5.7	0.0	11.5	5.7	0.0	11.5	5.7



&ANIMX T=00004 IS ON CR00015 USING 00004 BLKS R=0000

```
0001  FTN4
0002  C
0003  C      *** ANIMA SCHEDULING PROGRAM - CLAIM SWAP CONTROL **
0004  C
0005  C      PROGRAM ANIMX
0006  C
0007  C      COMMON ICOM (6176)
0008  C
0009  C      EQUIVALENCE (ICOM (51), ISTRK),
0010  >          (ICOM (52), ISECT),
0011  >          (ICOM (53), ICODE),
0012  >          (ICOM (54), LEN)
0013  C
0014  C      RECOVER PARAMETERS
0015  C
0016  C      CALL RMPAR (ICOM (51))
0017  C
0018  C      READ COMMON FROM THE DISC
0019  C
0020  C      CALL EXEC (1,66,ICOM,6144,ISTRK,ISECT)
0021  C      CALL EXEC (1,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0022  C
0023  C      SCHEDULE ANIMA
0024  C
0025  C      CALL ANIMA
0026  C
0027  C      WRITE COMMON BACK TO THE DISC
0028  C
0029  C      CALL EXEC (2,66,ICOM,6144,ISTRK,ISECT)
0030  C      CALL EXEC (2,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0031  C
0032  C      END
0033  END*
```

&CLAIS T=00004 IS ON CR00015 USING 00019 BLKS R=0000

```
0001  FTN4
0002  C
0003  C THIS FILE CONTAINS THE "DUMMY" SUBROUTINES REQUIRED FOR
0004  C THE SWAP PROCEDURE FOR PROGRAM CLAIM.
0005  C
0006  C THE SOURCE FILE IS :&CLAIS
0007  C THE OBJECT FILE IS :%CLAIS
0008  C
0009  C     COMMON BLOCK INITIALIZATION
0010  C
0011      SUBROUTINE GETID
0012      COMMON ICOM (6176)
0013      INTEGER  GETIX (3)
0014      DATA GETIX /2HGE,2HTI,2HX /
0015      CALL SWAPC (GETIX)
0016      RETURN
0017      END
0018  C
0019  C     NON-STANDARD EXPECTATION VALUES
0020  C
0021      SUBROUTINE ISNEV
0022      COMMON ICOM (6176)
0023      INTEGER ISNEX (3)
0024      DATA ISNEX /2HIS,2HNE,2HX /
0025      CALL SWAPC (ISNEX)
0026      RETURN
0027      END
0028  C
0029  C     GENERAL DESCRIPTION EXECUTIVE
0030  C
0031      SUBROUTINE GDE
0032      COMMON ICOM (6176)
0033      INTEGER GDEX (3)
0034      DATA GDEX /2HGD,2HEX,2H  /
0035      CALL SWAPC (GDEX)
0036      RETURN
0037      END
0038  C
0039  C     DATA STORAGE/RETRIEVAL
0040  C
0041      SUBROUTINE SRCD
0042      COMMON ICOM (6176)
0043      INTEGER SRCDX (3)
0044      DATA SRCDX /2HSR,2HCD,2HX /
0045      CALL SWAPC (SRCDX)
0046      RETURN
0047      END
0048  C
0049  C     ENVIRONMENTAL DATA EXECUTIVE (ABBREVIATED DISPLAY)
0050  C
0051      SUBROUTINE EIAD
0052      COMMON ICOM (6176)
0053      INTEGER EIADX (3)
0054      DATA EIADX /2HEI,2HAD,2HX /
```

```

0055      CALL SWAPC (EIADX)
0056      RETURN
0057      END
0058  C
0059  C      ENVIRONMENTAL DATA EXECUTIVE (FULL DISPLAY)
0060  C
0061      SUBROUTINE EIFD
0062      COMMON ICOM (6176)
0063      INTEGER EIFDX (3)
0064      DATA EIFDX /2HEI,2HFD,2HX /
0065      CALL SWAPC (EIFDX)
0066      RETURN
0067      END
0068  C
0069  C      ENVIRONMENTAL DATA DISPLAY - SEGMENT 1
0070  C
0071      SUBROUTINE DCDS1
0072      COMMON ICOM (6176)
0073      INTEGER DCDSX (3)
0074      DATA DCDSX /2HDC,2HDS,2HX /
0075      CALL SWAPC (DCDSX)
0076      RETURN
0077      END
0078  C
0079  C      ENVIRONMENTAL DATA DISPLAY - SEGMENT 2
0080  C
0081      SUBROUTINE DCDS2
0082      COMMON ICOM (6176)
0083      INTEGER DCDSO (3)
0084      DATA DCDSO /2HDC,2HDS,2HO /
0085      CALL SWAPC (DCDSO)
0086      RETURN
0087      END
0088  C
0089  C      EXPECTATION VALUES DISPLAY
0090  C
0091      SUBROUTINE DCEV
0092      COMMON ICOM (6176)
0093      INTEGER DCEVX (3)
0094      DATA DCEVX /2HDC,2HEV,2HX /
0095      CALL SWAPC (DCEVX)
0096      RETURN
0097      END
0098  C
0099  C      ENVIRONMENTAL FEASIBILITY
0100  C
0101      SUBROUTINE FEAS1
0102      COMMON ICOM (6176)
0103      INTEGER FEASX (3)
0104      DATA FEASX /2HFE,2HAS,2HX /
0105      CALL SWAPC (FEASX )
0106      RETURN
0107      END
0108  C
0109  C      TECHNIQUES AND ECONOMICS
0110  C

```



```

0111      SUBROUTINE TECON
0112      COMMON ICOM (6176)
0113      INTEGER      TECOX (3)
0114      DATA TECOX /2HTE,2HCO,2HX /
0115      CALL SWAPC (TECOX)
0116      RETURN
0117      END
0118  C
0119  C      OPTIMUM USE
0120  C
0121      SUBROUTINE OPUSE
0122      COMMON ICOM (6176)
0123      INTEGER      OPUSX (3)
0124      DATA OPUSX /2HOP,2HUS,2HX /
0125      CALL SWAPC (OPUSX)
0126      RETURN
0127      END
0128  C
0129  C      TRUCK AND SHOVEL GRADING EXECUTIVE
0130  C
0131      SUBROUTINE TSGE
0132      COMMON ICOM (6176)
0133      INTEGER      TSGEX (3)
0134      DATA TSGEX /2HTS,2HGE,2HX /
0135      CALL SWAPC (TSGEX)
0136      RETURN
0137      END
0138  END$

```

&CLIMX T=00004 IS ON CR00015 USING 00004 BLKS R=0000

```
0001  FTN4
0002  C
0003  C      ** CLIMA SCHEDULING PROGRAM - CLAIM SWAP CONTROL **
0004  C
0005      PROGRAM CLIMX
0006  C
0007      COMMON ICOM (6176)
0008  C
0009      EQUIVALENCE (ICOM (51), ISTRK),
0010      >          (ICOM (52), ISECT),
0011      >          (ICOM (53), ICODE),
0012      >          (ICOM (54), LEN)
0013  C
0014  C      RECOVER PARAMETERS
0015  C
0016      CALL RMPAR (ICOM (51))
0017  C
0018  C      READ COMMON FROM THE DISC
0019  C
0020      CALL EXEC (1,66,ICOM,6144,ISTRK,ISECT)
0021      CALL EXEC (1,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0022  C
0023  C      SCHEDULE CLIMA
0024  C
0025      CALL      CLIMA
0026  C
0027  C      WRITE COMMON BACK TO THE DISC
0028  C
0029      CALL EXEC (2,66,ICOM,6144,ISTRK,ISECT)
0030      CALL EXEC (2,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0031  C
0032      END
0033  END$
```

%DCDS0 T=00004 IS ON CRO0015 USING 00004 BLKS R=0000

```
0001  FTN4
0002  C
0003  C      ** DCDS2 SCHEDULING PROGRAM - CLAIM SWAP CONTROL **
0004  C
0005  PROGRAM DCDS0
0006  C
0007  COMMON ICOM (6176)
0008  C
0009  EQUIVALENCE (ICOM (51), ISTRK),
0010  >          (ICOM (52), ISECT),
0011  >          (ICOM (53), ICODE),
0012  >          (ICOM (54), LEN)
0013  C
0014  C      RECOVER PARAMETERS
0015  C
0016  CALL RMPAR (ICOM (51))
0017  C
0018  C      READ COMMON FROM THE DISC
0019  C
0020  CALL EXEC (1,66,ICOM,6144,ISTRK,ISECT)
0021  CALL EXEC (1,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0022  C
0023  C      SCHEDULE DCDS2
0024  C
0025  CALL DCDS2
0026  C
0027  C      WRITE COMMON BACK TO THE DISC
0028  C
0029  CALL EXEC (2,66,ICOM,6144,ISTRK,ISECT)
0030  CALL EXEC (2,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0031  C
0032  END
0033  ENDS
```



&DCDSX T=00004 IS ON CR00015 USING 00004 BLKS R=0000

```
0001  FTN4
0002  C
0003  C      ** DCDS1 SCHEDULING PROGRAM - CLAIM SWAP CONTROL **
0004  C      PROGRAM DCDSX
0005  C
0006  C      COMMON ICOM (6176)
0007  C
0008  C      EQUIVALENCE (ICOM (51), ISTRK),
0009  C      >          (ICOM (52), ISECT),
0010  C      >          (ICOM (53), ICODE),
0011  C      >          (ICOM (54), LEN)
0012  C
0013  C      RECOVER PARAMETERS
0014  C
0015  C      CALL RMPAR (ICOM (51))
0016  C
0017  C      READ COMMON FROM THE DISC
0018  C
0019  C      CALL EXEC (1,66,ICOM,6144,ISTRK,ISECT)
0020  C      CALL EXEC (1,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0021  C
0022  C      SCHEDULE DCDS1
0023  C
0024  C      CALL DCDS1
0025  C
0026  C      WRITE COMMON BACK TO THE DISC
0027  C
0028  C      CALL EXEC (2,66,ICOM,6144,ISTRK,ISECT)
0029  C      CALL EXEC (2,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0030  C
0031  C      END
0032  END*
```

&DCEVX T=00004 IS ON CR00015 USING 00004 BLKS R=0033

```
0001  FTN4
0002  C
0003  C      ** DCEV SCHEDULING PROGRAM - CLAIM SWAP CONTROL **
0004  C
0005  C      PROGRAM DCEVX
0006  C
0007  C      COMMON ICOM (6176)
0008  C
0009  C      EQUIVALENCE (ICOM (51), ISTRK),
0010  C      >          (ICOM (52), ISECT),
0011  C      >          (ICOM (53), ICODE),
0012  C      >          (ICOM (54), LEN)
0013  C
0014  C      RECOVER PARAMETERS
0015  C
0016  C      CALL RMPAR (ICOM (51))
0017  C
0018  C      READ COMMON FROM THE DISC
0019  C
0020  C      CALL EXEC (1,66,ICOM,6144,ISTRK,ISECT)
0021  C      CALL EXEC (1,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0022  C
0023  C      SCHEDULE DCEV
0024  C
0025  C      CALL DCEV
0026  C
0027  C      WRITE COMMON BACK TO THE DISC
0028  C
0029  C      CALL EXEC (2,66,ICOM,6144,ISTRK,ISECT)
0030  C      CALL EXEC (2,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0031  C
0032  C      END
0033  C      END%
```

&DLDCX I=00004 IS ON CR00015 USING 00005 BLKS R=0037

```
0001  FTN4
0002      PROGRAM DLDCX
0003  C
0004  C PROGRAM DLDCX IS SWAPPED IN BY THE DLGE EXECUTIVE. AFTER
0005  C READING COMMON FROM THE DISK, DLDCX CALLS SUBROUTINE DLDCS,
0006  C TO DISPLAY CURRENT SLOPES AND PERCENTS AND ALLOW USER MODIFICATION
0007  C TO THEM.
0008  C BEFORE TERMINATION, DLDCX WRITE COMMON BACK TO THE DISK.
0009  C
0010      COMMON ICOM (6176)
0011  C
0012  C
0013      EQUIVALENCE (ICOM (51), ISTRK),
0014      >              (ICOM (52), ISECT),
0015      >              (ICOM (53), ICODE),
0016      >              (ICOM (54), LEN)
0017  C
0018  C      RECOVER PARAMETERS
0019  C
0020      CALL RMPAR (ICOM (51))
0021  C
0022  C      READ COMMON FROM THE DISC
0023  C
0024      CALL EXEC (1,66,ICOM,6144,ISTRK,ISECT)
0025      CALL EXEC (1,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0026  C
0027  C      SCHEDULE DLDCS
0028  C
0029      CALL DLDCS
0030  C
0031  C      WRITE COMMON BACK TO THE DISC
0032  C
0033      CALL EXEC (2,66,ICOM,6144,ISTRK,ISECT)
0034      CALL EXEC (2,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0035  C
0036      END
0037  END$
```



&DLGES T=00004 IS ON CR00015 USING 00004 BLKS R=0024

```
0001 FTN4
0002 C
0003 C THESE ARE THE "DUMMY" SUBROUTINES CALLED BY DLGE
0004 C THAT REQUIRE SWAP CONTROL
0005 C
0006 C SOURCE FILE : &DLGES
0007 C OBJECT FILE : &DLGES
0008 C
0009 C
0010     SUBROUTINE DLRLE
0011     COMMON ICOM (6176)
0012     INTEGER DLRLX (3)
0013     DATA DLRLX /2HDL,2HRL,2HX /
0014     CALL SWAPC (DLRLX)
0015     RETURN
0016     END
0017 C
0018     SUBROUTINE DLST
0019     COMMON ICOM (6176)
0020     INTEGER DLSTX(3)
0021     DATA DLSTX/2HDL,2HST,2HX /
0022     CALL SWAPC(DLSTX)
0023     RETURN
0024     END
0025 C
0026     SUBROUTINE DLRSI
0027     COMMON ICOM (6176)
0028     INTEGER DLRSX(3)
0029     DATA DLRSX/2HDL,2HRS,2HX /
0030     CALL SWAPC(DLRSX)
0031     END
0032 C
0033     SUBROUTINE DLDCS
0034     COMMON ICOM (6176)
0035     INTEGER DLDCX(3)
0036     DATA DLDCX/2HDL,2HDC,2HX /
0037     CALL SWAPC(DLDCX)
0038     END
0039     END$
```

8DLGEX T=00004 IS ON CR00015 USING 00004 BLKS R=0000

```
0001  FTN4
0002      PROGRAM DLGEX
0003  C
0004  C PROGRAM DLGEX IS SWAPPED IN BY THE CLAIM EXECUTIVE. AFTER
0005  C READING COMMON FROM THE DISK, DLGEX CALLS SUBROUTINE DLGE,
0006  C THE DRAGLINE GRADING EXECUTIVE. BEFORE TERMINATION, DLGEX
0007  C WRITES COMMON BACK TO THE DISK.
0008  C
0009      COMMON ICOM (6176)
0010  C
0011  C
0012      EQUIVALENCE (ICOM (51), ISTRK),
0013      >              (ICOM (52), ISECT),
0014      >              (ICOM (53), ICODE),
0015      >              (ICOM (54), LEN)
0016  C
0017  C      RECOVER PARAMETERS
0018  C
0019      CALL RMPAR (ICOM (51))
0020  C
0021  C      READ COMMON FROM THE DISC
0022  C
0023      CALL EXEC (1,66,ICOM,6144,ISTRK,ISECT)
0024      CALL EXEC (1,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0025  C
0026  C      SCHEDULE DLGE
0027  C
0028      CALL DLGE
0029  C
0030  C      WRITE COMMON BACK TO THE DISC
0031  C
0032      CALL EXEC (2,66,ICOM,6144,ISTRK,ISECT)
0033      CALL EXEC (2,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0034  C
0035      END
0036  END$
```

&DLRLX T=00004 IS ON CR00015 USING 00004 BLKS R=0031

```
0001  FTN4
0002      PROGRAM DLRLX
0003  C
0004  C  DLRLE SCHEDULING PROGRAM
0005  C
0006      COMMON ICOM (6176)
0007      EQUIVALENCE (ICOM (51), ISTRK),
0008      >          (ICOM (52), ISECT),
0009      >          (ICOM (53), ICODE),
0010      >          (ICOM (54), LEN)
0011  C
0012  C      RECOVER PARAMETERS
0013  C
0014      CALL RMPAR (ICOM (51))
0015  C
0016  C      READ COMMON FROM THE DISK
0017  C
0018      CALL EXEC (1,66,ICOM,6144,ISTRK,ISECT)
0019      CALL EXEC (1,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0020  C
0021  C      SCHEDULE DLRLE
0022  C
0023      CALL DLRLE
0024  C
0025  C      WRITE COMMON BACK TO THE DISK
0026  C
0027      CALL EXEC (2,66,ICOM,6144,ISTRK,ISECT)
0028      CALL EXEC (2,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0029  C
0030      END
0031  END$
```



```

0001  FTN4
0002      SUBROUTINE GRAFS
0003      COMMON ICOM(6176)
0004      COMMON /TABLE/ KTAB(114)
0005      INTEGER KARRAY(146),KPARAM(5),GRAFX(3)
0006      EQUIVALENCE(KPARAM(1),ISTRK),(KPARAM(2),ISECT),
0007 > (KPARAM(3),ICODE),(KPARAM(4),LEN)
0008      DATA GRAFX/2HGR,2HAF,2HX /
0009      CALL EXEC (15,2,ISTRK,1DISC,ISECT)
0010      ISECT = 0
0011      DO 100 K = 6145,6176
0012          KARRAY(K-6144) = ICOM(K)
0013 100 CONTINUE
0014      DO 200 K = 33,146
0015          KARRAY(K) = KTAB(K-32)
0016 200 CONTINUE
0017      CALL IDSEG (GRAFX,1)
0018      CALL EXEC(2,66,ICOM,6144,ISTRK,ISECT)
0019      CALL EXEC(2,66,KARRAY,146,ISTRK+1,ISECT)
0020      CALL EXEC(9,GRAFX,ISTRK,ISECT,ICODE,LEN)
0021      CALL EXEC(1,66,ICOM,6144,ISTRK,ISECT)
0022      CALL EXEC(1,66,KARRAY,146,ISTRK+1,ISECT)
0023      CALL IDSEG (GRAFX,2)
0024      DO 300 K = 6145, 6176
0025          ICOM(K) = KARRAY(K-6144)
0026 300 CONTINUE
0027      DO 400 K = 33,146
0028          KTAB(K-32) = KARRAY(K)
0029 400 CONTINUE
0030      CALL EXEC(16,2,ISTRK,1DISC,ISECT)
0031      RETURN
0032      END
0033  END$

```

&DLRSX T=00004 IS ON CRO0015 USING 00004 BLKS R=0034

```
0001  FTN4
0002      PROGRAM DLRSX
0003  C
0004  C THIS PROGRAM IS SWAPPED IN BY DLGE TO SCHEDULE DLRSL
0005  C
0006  C
0007  C ***** CLAIM RELEASE 1.0 - MARCH 1, 1980 *****
0008  C
0009      COMMON ICOM (6176)
0010  C
0011  C
0012      EQUIVALENCE (ICOM (51), ISTRK),
0013      >              (ICOM (52), ISECT),
0014      >              (ICOM (53), ICODE),
0015      >              (ICOM (54), LEN)
0016  C
0017  C      RECOVER PARAMETERS
0018  C
0019      CALL RMPAR (ICOM (51))
0020  C
0021  C      READ COMMON FROM THE DISC
0022  C
0023      CALL EXEC (1,66,ICOM,6144,ISTRK,ISECT)
0024      CALL EXEC (1,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0025  C
0026      CALL DLRSL
0027  C
0028  C      WRITE COMMON BACK TO THE DISC
0029  C
0030      CALL EXEC (2,66,ICOM,6144,ISTRK,ISECT)
0031      CALL EXEC (2,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0032  C
0033      END
0034  END$
```

&DLSTX T=00004 IS ON CR00015 USING 00004 BLKS R=0036

```
0001  FTN4
0002      PROGRAM DLSTX
0003  C
0004  C PROGRAM DLSTX IS SWAPPED IN BY THE DLGE EXECUTIVE. AFTER
0005  C READING COMMON FROM THE DISK, DLSTX CALLS SUBROUTINE DLST,
0006  C TO PRINT TABLES OF THE SUMMARY DATA.
0007  C BEFORE TERMINATION, DLSTX WRITE COMMON BACK TO THE DISK.
0008  C
0009      COMMON ICOM (6176)
0010  C
0011  C
0012      EQUIVALENCE (ICOM (51), ISTRK),
0013      >              (ICOM (52), ISECT),
0014      >              (ICOM (53), ICODE),
0015      >              (ICOM (54), LEN)
0016  C
0017  C      RECOVER PARAMETERS
0018  C
0019      CALL RMPAR (ICOM (51))
0020  C
0021  C      READ COMMON FROM THE DISC
0022  C
0023      CALL EXEC (1,66,ICOM,6144,ISTRK,ISECT)
0024      CALL EXEC (1,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0025  C
0026  C      SCHEDULE DLST
0027  C
0028      CALL DLST
0029  C
0030  C      WRITE COMMON BACK TO THE DISC
0031  C
0032      CALL EXEC (2,66,ICOM,6144,ISTRK,ISECT)
0033      CALL EXEC (2,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0034  C
0035      END
0036  END*
```



%EIADX T=00004 IS ON CR00015 USING 00004 BLKS R=0000

```
0001  FTN4
0002  C
0003  C      ** EIAD SCHEDULING PROGRAM - CLAIM SWAP CONTROL **
0004  C
0005  C      PROGRAM EIADX
0006  C
0007  C      COMMON ICON (6176)
0008  C
0009  C      EQUIVALENCE (ICON (51), ISTRK),
0010  >                (ICON (52), ISECT),
0011  >                (ICON (53), ICODE),
0012  >                (ICON (54), LEN)
0013  C
0014  C      RECOVER PARAMETERS
0015  C
0016  C      CALL RMPAR (ICON (51))
0017  C
0018  C      READ COMMON FROM THE DISC
0019  C
0020  C      CALL EXEC (1,66,ICON,6144,ISTRK,ISECT)
0021  C      CALL EXEC (1,66,ICON(6145),LEN,ISTRK+1,ISECT)
0022  C
0023  C      SCHEDULE EIAD
0024  C
0025  C      CALL EIAD
0026  C
0027  C      WRITE COMMON BACK TO THE DISC
0028  C
0029  C      CALL EXEC (2,66,ICON,6144,ISTRK,ISECT)
0030  C      CALL EXEC (2,66,ICON(6145),LEN,ISTRK+1,ISECT)
0031  C
0032  C      END
0033  C      END%
```

%EIFDS T=00004 IS ON CRO0015 USING 00008 BLKS R=0000

```
0001  FTN4
0002  C
0003  C      FILE : %EIFDS
0004  C      **** EIFD SUBROUTINES USING CLAIM SWAP CONTROL ****
0005  C
0006      SUBROUTINE CLINA
0007      COMMON ICOM (6176)
0008      INTEGER CLIMX (3)
0009      DATA CLIMX /2HCL,2HIM,2HX /
0010      CALL SWAPC (CLIMX)
0011      RETURN
0012      END
0013  C
0014      SUBROUTINE TOPSO
0015      COMMON ICOM (6176)
0016      INTEGER TOPSX (3)
0017      DATA TOPSX /2HTO,2HPS,2HX /
0018      CALL SWAPC (TOPSX)
0019      RETURN
0020      END
0021  C
0022      SUBROUTINE SUBSO
0023      COMMON ICOM (6176)
0024      INTEGER SUBSX (3)
0025      DATA SUBSX /2HEU,2HBS,2HX /
0026      CALL SWAPC (SUBSX)
0027      RETURN
0028      END
0029  C
0030      SUBROUTINE OVRBO
0031      COMMON ICOM (6176)
0032      INTEGER OVRSX (3)
0033      DATA OVRSX /2HOV,2HRS,2HX /
0034      CALL SWAPC (OVRSX)
0035      RETURN
0036      END
0037  C
0038      SUBROUTINE SURHY
0039      COMMON ICOM (6176)
0040      INTEGER SURHX (3)
0041      DATA SURHX /2HSU,2HRH,2HX /
0042      CALL SWAPC (SURHX)
0043      RETURN
0044      END
0045  C
0046      SUBROUTINE GRWHY
0047      COMMON ICOM (6176)
0048      INTEGER GRWHX (3)
0049      DATA GRWHX /2HGR,2HWH,2HX /
0050      CALL SWAPC (GRWHX)
0051      RETURN
0052      END
0053  C
0054      SUBROUTINE VEGET
```

```

0055      COMMON ICOM (6176)
0056      INTEGER      VEGEX (3)
0057      DATA VEGEX /2HVE,2HGE,2HX /
0058      CALL SWAPC (VEGEX)
0059      RETURN
0060      END
0061  C
0062      SUBROUTINE ANIMA
0063      COMMON ICOM (6176)
0064      INTEGER      ANIMX (3)
0065      DATA ANIMX /2HAN,2HIM,2HX /
0066      CALL SWAPC (ANIMX)
0067      RETURN
0068      END
0069  C
0070      SUBROUTINE SOCEC
0071      COMMON ICOM (6176)
0072      INTEGER      SOCEX (3)
0073      DATA SOCEX /2HSD,2HCE,2HX /
0074      CALL SWAPC (SOCEX)
0075      RETURN
0076      END
0077  C
0078  END$

```



&EIFDX T=00004 IS ON CRO0015 USING 00004 BLKS R=0000

```
0001  FTN4
0002  C
0003  C      ** EIFD SCHEDULING PROGRAM - CLAIM SWAP CONTROL **
0004  C
0005  PROGRAM EIFDX
0006  C
0007  COMMON ICOM (6176)
0008  C
0009  EQUIVALENCE (ICOM (51), ISTRK),
0010  >          (ICOM (52), ISECT),
0011  >          (ICOM (53), ICODE),
0012  >          (ICOM (54), LEN)
0013  C
0014  C      RECOVER PARAMETERS
0015  C
0016  CALL RMPAR (ICOM (51))
0017  C
0018  C      READ COMMON FROM THE DISC
0019  C
0020  CALL EXEC (1,66,ICOM,6144,ISTRK,ISECT)
0021  CALL EXEC (1,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0022  C
0023  C      SCHEDULE EIFD
0024  C
0025  CALL    EIFD
0026  C
0027  C      WRITE COMMON BACK TO THE DISC
0028  C
0029  CALL EXEC (2,66,ICOM,6144,ISTRK,ISECT)
0030  CALL EXEC (2,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0031  C
0032  END
0033  END*
```

8FEASX T=00004 IS ON CR00015 USING 00004 BLKS R=0000

```
0001  FYN4
0002  C
0003  C      ** FEASI SCHEDULING PROGRAM - CLAIM SWAP CONTROL **
0004  C
0005  C      PROGRAM FEASX
0006  C
0007  C      COMMON ICOM (6176)
0008  C
0009  C      EQUIVALENCE (ICOM (51), ISTRK),
0010  >                (ICOM (52), ISECT),
0011  >                (ICOM (53), ICODE),
0012  >                (ICOM (54), LEN)
0013  C
0014  C      RECOVER PARAMETERS
0015  C
0016  C      CALL RMPAR (ICOM (51))
0017  C
0018  C      READ COMMON FROM THE DISC
0019  C
0020  C      CALL EXEC (1,66,ICOM,6144,ISTRK,ISECT)
0021  C      CALL EXEC (1,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0022  C
0023  C      SCHEDULE FEASI
0024  C
0025  C      CALL FEASI
0026  C
0027  C      WRITE COMMON BACK TO THE DISC
0028  C
0029  C      CALL EXEC (2,66,ICOM,6144,ISTRK,ISECT)
0030  C      CALL EXEC (2,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0031  C
0032  C      END
0033  C      END$
```

&GDES T=00004 IS ON CR00015 USING 00003 BLKS R=0000

```
0001 FTN4
0002 C
0003 C FILE : &IGDS
0004 C *** IGD SUBROUTINES USING CLAIM SWAP CONTROL ***
0005 C
0006 SUBROUTINE DLGE
0007 COMMON ICOM (6176)
0008 INTEGER DLGEX (3)
0009 DATA DLGEX /2HDL,2HGE,2HX /
0010 CALL SWAPC (DLGEX)
0011 RETURN
0012 END
0013 C
0014 SUBROUTINE TSGE
0015 COMMON ICOM (6176)
0016 INTEGER TSGEX (3)
0017 DATA TSGEX /2HTS,2HGE,2HX /
0018 CALL SWAPC (TSGEX)
0019 RETURN
0020 END
0021 C
0022 SUBROUTINE TSST
0023 COMMON ICOM (6176)
0024 INTEGER TSSTX (3)
0025 DATA TSSTX /2HTS,2HST,2HX /
0026 CALL SWAPC (TSSTX)
0027 RETURN
0028 END
0029 END$
```



&GDEX Y=00004 IS ON CR00015 USING 00004 BLKS R=0000

```
0001  FTN4
0002      PROGRAM GDEX
0003  C
0004  C GDE SCHEDULING PROGRAM
0005  C
0006      COMMON ICOM (6176)
0007  C
0008      EQUIVALENCE (ICOM (51), ISTRK),
0009      >              (ICOM (52), ISECT),
0010      >              (ICOM (53), ICODE),
0011      >              (ICOM (54), LEN)
0012  C
0013  C      RECOVER PARAMETERS
0014  C
0015      CALL RMFAR (ICOM (51))
0016  C
0017  C      READ COMMON FROM THE DISC
0018  C
0019      CALL EXEC (1,66,ICOM,6144,ISTRK,ISECT)
0020      CALL EXEC (1,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0021  C
0022  C      SCHEDULE GDE
0023  C
0024      CALL GDE
0025  C
0026  C      WRITE COMMON BACK TO THE DISC
0027  C
0028      CALL EXEC (2,66,ICOM,6144,ISTRK,ISECT)
0029      CALL EXEC (2,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0030  C
0031      END
0032  END$
```

&GETIX T=00004 IS ON CR00015 USING 00004 BLKS R=0000

```
0001  FTN4
0002  C
0003  C      ** GETID SCHEDULING PROGRAM - CLAIM SWAP CONTROL **
0004  C
0005  C      PROGRAM GETIX
0006  C
0007  C      COMMON ICOM (6176)
0008  C
0009  C      EQUIVALENCE (ICOM (51), ISTRK),
0010  >          (ICOM (52), ISECT),
0011  >          (ICOM (53), ICODE),
0012  >          (ICOM (54), LEN)
0013  C
0014  C      RECOVER PARAMETERS
0015  C
0016  C      CALL RMPAR (ICOM (51))
0017  C
0018  C      READ COMMON FROM THE DISC
0019  C
0020  C      CALL EXEC (1,66,ICOM,6144,ISTRK,ISECT)
0021  C      CALL EXEC (1,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0022  C
0023  C      SCHEDULE GETID
0024  C
0025  C      CALL GETID
0026  C
0027  C      WRITE COMMON BACK TO THE DISC
0028  C
0029  C      CALL EXEC (2,66,ICOM,6144,ISTRK,ISECT)
0030  C      CALL EXEC (2,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0031  C
0032  C      END
0033  END$
```

&GRAFX T=00004 IS ON CR00015 USING 00005 BLKS R=0043

```
0001  FTN4
0002      PROGRAM GRAFX
0003  C
0004  C GRAFS SCHEDULING PROGRAM
0005  C
0006      COMMON ICOM(6176)
0007      COMMON /TABLE/ KTAB(114)
0008      INTEGER KPARAM(5),KARRAY(146)
0009      EQUIVALENCE (KPARAM(1),ISTRK),(KPARAM(2),ISECT),
0010      >          (KPARAM(3),ICODE),(KPARAM(4),LEN)
0011  C
0012  C RECOVER PARAMETERS
0013  C
0014      CALL RMPAR (KPARAM)
0015  C
0016  C READ FROM THE DISK
0017  C
0018      CALL EXEC (1,66,ICOM,6144,ISTRK,ISECT)
0019      CALL EXEC (1,66,KARRAY,146,ISTRK+1,ISECT)
0020      DO 100 K = 6145,6176
0021          ICOM(K) = KARRAY(K-6144)
0022      100 CONTINUE
0023      DO 200 K = 33,146
0024          KTAB(K-32) = KARRAY(K)
0025      200 CONTINUE
0026  C
0027  C SCHEDULE GRAFS
0028  C
0029      CALL GRAFS
0030  C
0031  C WRITE BACK TO THE DISK
0032  C
0033      DO 300 K = 6145,6176
0034          KARRAY(K-6144) = ICOM(K)
0035      300 CONTINUE
0036      DO 400 K = 33,146
0037          KARRAY(K+32) = KTAB(K)
0038      400 CONTINUE
0039  C
0040      CALL EXEC(2,66,KARRAY,6144,ISTRK,ISECT)
0041      CALL EXEC(2,66,KARRAY(6145),146,ISTRK+1,ISECT)
0042      END
0043  END$
```



&GRWHX T=00004 IS ON CR00015 USING 00004 BLKS R=0000

```
0001  FIN4
0002  C
0003  C      ** GRWHY SCHEDULING PROGRAM - CLAIM SWAP CONTROL **
0004  C
0005  C      PROGRAM GRWHX
0006  C
0007  C      COMMON ICOM (6176)
0008  C
0009  C      EQUIVALENCE (ICOM (51), ISTRK),
0010  >          (ICOM (52), ISECT),
0011  >          (ICOM (53), ICODE),
0012  >          (ICOM (54), LEN)
0013  C
0014  C      RECOVER PARAMETERS
0015  C
0016  C      CALL RMPAR (ICOM (51))
0017  C
0018  C      READ COMMON FROM THE DISC
0019  C
0020  C      CALL EXEC (1,66,ICOM,6144,ISTRK,ISECT)
0021  C      CALL EXEC (1,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0022  C
0023  C      SCHEDULE GRWHY
0024  C
0025  C      CALL GRWHY
0026  C
0027  C      WRITE COMMON BACK TO THE DISC
0028  C
0029  C      CALL EXEC (2,66,ICOM,6144,ISTRK,ISECT)
0030  C      CALL EXEC (2,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0031  C
0032  C      END
0033  C      END$
```

&ISNEX Y=00004 IS ON CR00015 USING 00004 BLKS R=0000

```
0001  FTN4
0002  C
0003  C      ** ISNEV SCHEDULING PROGRAM - CLAIM SWAP CONTROL **
0004  C
0005  C      PROGRAM ISNEX
0006  C
0007  C      COMMON ICOM (6176)
0008  C
0009  C      EQUIVALENCE (ICOM (51), ISTRK),
0010  C      >          (ICOM (52), ISECT),
0011  C      >          (ICOM (53), ICODE),
0012  C      >          (ICOM (54), LEN)
0013  C
0014  C      RECOVER PARAMETERS
0015  C
0016  C      CALL RMPAR (ICOM (51))
0017  C
0018  C      READ COMMON FROM THE DISC
0019  C
0020  C      CALL EXEC (1,66,ICOM,6144,ISTRK,ISECT)
0021  C      CALL EXEC (1,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0022  C
0023  C      SCHEDULE ISNEV
0024  C
0025  C      CALL ISNEV
0026  C
0027  C      WRITE COMMON BACK TO THE DISC
0028  C
0029  C      CALL EXEC (2,66,ICOM,6144,ISTRK,ISECT)
0030  C      CALL EXEC (2,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0031  C
0032  C      END
0033  C      END$
```

OPUSX T=00004 IS ON CR00015 USING 00004 BLKS R=0000

```
0001  FTN4
0002  C
0003  C      ** OPUSE SCHEDULING PROGRAM - CLAIM SWAP CONTROL **
0004  C
0005  PROGRAM OPUSX
0006  C
0007  COMMON ICOM (6176)
0008  C
0009  EQUIVALENCE (ICOM (51), ISTRK),
0010  >          (ICOM (52), ISECT),
0011  >          (ICOM (53), ICODE),
0012  >          (ICOM (54), LEN)
0013  C
0014  C      RECOVER PARAMETERS
0015  C
0016  CALL RMPAR (ICOM (51))
0017  C
0018  C      READ COMMON FROM THE DISC
0019  C
0020  CALL EXEC (1,66,ICOM,6144,ISTRK,ISECT)
0021  CALL EXEC (1,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0022  C
0023  C      SCHEDULE OPUSE
0024  C
0025  CALL OPUSE
0026  C
0027  C      WRITE COMMON BACK TO THE DISC
0028  C
0029  CALL EXEC (2,66,ICOM,6144,ISTRK,ISECT)
0030  CALL EXEC (2,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0031  C
0032  END
0033  END$
```



%OVRBX T=00004 IS ON CR00015 USING 00004 BLKS R=0000

```
0001  FTN4
0002  C
0003  C      ** OVRBD SCHEDULING PROGRAM - CLAIM SWAP CONTROL **
0004  C
0005  PROGRAM OVRBX
0006  C
0007  COMMON ICOM (6176)
0008  C
0009  EQUIVALENCE (ICOM (51), ISTRK),
0010  >          (ICOM (52), ISECT),
0011  >          (ICOM (53), ICODE),
0012  >          (ICOM (54), LEN)
0013  C
0014  C      RECOVER PARAMETERS
0015  C
0016  CALL RMPAR (ICOM (51))
0017  C
0018  C      READ COMMON FROM THE DISC
0019  C
0020  CALL EXEC (1,66,ICOM,6144,ISTRK,ISECT)
0021  CALL EXEC (1,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0022  C
0023  C      SCHEDULE OVRBD
0024  C
0025  CALL OVRBD
0026  C
0027  C      WRITE COMMON BACK TO THE DISC
0028  C
0029  CALL EXEC (2,66,ICOM,6144,ISTRK,ISECT)
0030  CALL EXEC (2,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0031  C
0032  END
0033  END$
```

2SOCEX T=00004 IS ON CR00015 USING 00004 BLKS R=0000

```
0001  FIN4
0002  C
0003  C      ** SOCEC SCHEDULING PROGRAM - CLAIM SWAP CONTROL **
0004  C
0005  PROGRAM SOCEX
0006  C
0007  COMMON ICOM (6176)
0008  C
0009  EQUIVALENCE (ICOM (51), ISTRK),
0010  >          (ICOM (52), ISECT),
0011  >          (ICOM (53), ICODE),
0012  >          (ICOM (54), LEN)
0013  C
0014  C      RECOVER PARAMETERS
0015  C
0016  CALL RMPAR (ICOM (51))
0017  C
0018  C      READ COMMON FROM THE DISC
0019  C
0020  CALL EXEC (1,66,ICOM,6144,ISTRK,ISECT)
0021  CALL EXEC (1,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0022  C
0023  C      SCHEDULE SOCEC
0024  C
0025  CALL SOCEC
0026  C
0027  C      WRITE COMMON BACK TO THE DISC
0028  C
0029  CALL EXEC (2,66,ICOM,6144,ISTRK,ISECT)
0030  CALL EXEC (2,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0031  C
0032  END
0033  END$
```

&SRCDX T=00004 IS ON CR00015 USING 00004 BLKS R=0000

```
0001  FTN4
0002  C
0003  C      ** SRCD SCHEDULING PROGRAM - CLAIM SWAP CONTROL **
0004  C
0005  C      PROGRAM SRCDX
0006  C
0007  C      COMMON ICOM (6176)
0008  C
0009  C      EQUIVALENCE (ICOM (51), ISTRK),
0010  >                (ICOM (52), ISECT),
0011  >                (ICOM (53), ICODE),
0012  >                (ICOM (54), LEN)
0013  C
0014  C      RECOVER PARAMETERS
0015  C
0016  C      CALL RMPAR (ICOM (51))
0017  C
0018  C      READ COMMON FROM THE DISC
0019  C
0020  C      CALL EXEC (1,66,ICOM,6144,ISTRK,ISECT)
0021  C      CALL EXEC (1,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0022  C
0023  C      SCHEDULE SRCD
0024  C
0025  C      CALL SRCD
0026  C
0027  C      WRITE COMMON BACK TO THE DISC
0028  C
0029  C      CALL EXEC (2,66,ICOM,6144,ISTRK,ISECT)
0030  C      CALL EXEC (2,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0031  C
0032  C      END
0033  END$
```



2SUBSX T=00004 IS ON CR00015 USING 00004 BLKS R=0000

```
0001  FTN4
0002  C
0003  C      ** SUBSO SCHEDULING PROGRAM - CLAIM SWAP CONTROL **
0004  C
0005  C      PROGRAM SUBSX
0006  C
0007  C      COMMON ICOM (6176)
0008  C
0009  C      EQUIVALENCE (ICOM (51), ISTRK),
0010  >          (ICOM (52), ISECT),
0011  >          (ICOM (53), ICODE),
0012  >          (ICOM (54), LEN)
0013  C
0014  C      RECOVER PARAMETERS
0015  C
0016  C      CALL RMPAR (ICOM (51))
0017  C
0018  C      READ COMMON FROM THE DISC
0019  C
0020  C      CALL EXEC (1,66,ICOM,6144,ISTRK,ISECT)
0021  C      CALL EXEC (1,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0022  C
0023  C      SCHEDULE SUBSO
0024  C
0025  C      CALL SUBSO
0026  C
0027  C      WRITE COMMON BACK TO THE DISC
0028  C
0029  C      CALL EXEC (2,66,ICOM,6144,ISTRK,ISECT)
0030  C      CALL EXEC (2,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0031  C
0032  C      END
0033  END$
```

&SURHX T=00004 IS ON CR00015 USING 00004 BLKS R=0000

```
0001  FTN4
0002  C
0003  C      ** SURHY SCHEDULING PROGRAM - CLAIM SWAP CONTROL **
0004  C
0005  C      PROGRAM SURHX
0006  C
0007  C      COMMON ICOM (6176)
0008  C
0009  C      EQUIVALENCE (ICOM (51), ISTRK),
0010  C      >              (ICOM (52), ISECT),
0011  C      >              (ICOM (53), ICODE),
0012  C      >              (ICOM (54), LEN)
0013  C
0014  C      RECOVER PARAMETERS
0015  C
0016  C      CALL RMFAR (ICOM (51))
0017  C
0018  C      READ COMMON FROM THE DISC
0019  C
0020  C      CALL EXEC (1,66,ICOM,6144,ISTRK,ISECT)
0021  C      CALL EXEC (1,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0022  C
0023  C      SCHEDULE SURHY
0024  C
0025  C      CALL SURHY
0026  C
0027  C      WRITE COMMON BACK TO THE DISC
0028  C
0029  C      CALL EXEC (2,66,ICOM,6144,ISTRK,ISECT)
0030  C      CALL EXEC (2,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0031  C
0032  C      END
0033  C      END$
```

&SWAPC T=00004 IS ON CR00015 USING 00018 BLKS R=0000

```
0001  FTN4
0002  C ===== SUBROUTINE  SWAPC =====
0003  C =
0004  C = CLAIM SWAP CONTROL SUBROUTINE
0005  C =
0006  C = SOURCE FILE : &SWAPC OBJECT FILE : %SWAPC
0007  C =====
0008  C
0009  C
0010  C DESCRIPTION:
0011  C
0012  C THIS IS THE CLAIM SWAP CONTROL SUBROUTINE. SWAPC PASSES CONTROL
0013  C TO THE SON, AND HANDLES THE COMMON TRANSFER BETWEEN SEGMENTS.
0014  C CALLING SEQUENCE:
0015  C
0016  C CALL SWAPC (SON)
0017  C
0018  C ARGUMENTS:
0019  C
0020  C SON -> 3 WORD ID SEGMENT OF PROGRAM TO BE SWAPPED
0021  C
0022  C ACCESSED BY:
0023  C
0024  C CLAIM
0025  C RCLAM (SEAMPLAN)
0026  C ISB
0027  C TSDE
0028  C EIFB
0029  C
0030  C SUBROUTINES SCHEDULED:
0031  C
0032  C EXEC (SYS)
0033  C IDSES (SYS)
0034  C
0035  C LOCAL VARIABLES: NONE
0036  C
0037  C REFERENCES:
0038  C
0039  C RTE REFERENCE MANUAL
0040  C
0041  C AUTHOR: ORVILLE D. GREEN
0042  C
0043  C LAST REVISION: SEPTEMBER, 1979 - OBG
0044  C
0045  C
0046  C =====
0047  C
```



```

0040 C
0047 SUBROUTINE SWAPC (SON)
0050 C
0051 C
0052 C TEKTRONIX COMMON
0053 C
0054 COMMON ITEX (45)
0055 C
0056 C LOGICAL UNITS AND COMMON LOCATION
0057 C
0058 COMMON IARRY(5),IARY2(5),LER,LUF,LUL
0059 C
0060 C POINTERS
0061 C
0062 COMMON EXIT ,IARM(3),ICL1(2),ICEN(3),ICRW(5)
0063 COMMON IOPTH ,IOVR(7),IPNTR ,IOCC(6),IOUB(8)
0064 COMMON ISUR(6),ITOP(9),IVEC(2),LEXIT ,LUC
0065 COMMON MODE ,NARM ,NCL1 ,NGEN ,NORW
0066 COMMON NOVR ,NSECTS ,NSCC ,NSUB ,NSUR
0067 COMMON NTOP ,NU ,NVEC
0068 C
0069 C GRABING PARAMETERS
0070 C
0071 COMMON AREA(5),BENLEN(5,10),BENWI(5,10),COCB,CCPA(5)
0072 COMMON GRDUBS(5),HWHT(5,10),HWCL1(5,10),NSPP(5),PCER17(4)
0073 COMMON PERENT(5,10),REHCOPY(5),REHVOL(5),SLOPE(5,10),WBF
0074 C
0075 C CATEGORY TEXT
0076 C
0077 COMMON ANIM(23,13),CLMA(13,13),CBES(15,13),CWHY(22,13)
0078 COMMON OVRDB(11,13),CDCL(13), SCCL(33,13),CWHY(44,13)
0079 COMMON TPCL(47,13),VCTA(15,13)
0080 C
0081 C EXPECTATION VALUES
0082 C
0083 COMMON ANIMAL(13,6),CLIMAT(8,6),GENDES(8,6),GRWHYB(19,6)
0084 COMMON OVRDBB(28,6),SCCECH(27,6),SUBSOI(30,6),SURHYB(23,6)
0085 COMMON TOPSOI(33,6),VECTA(10,6)
0086 C
0087 C CATEGORY RESPONSES
0088 C
0089 COMMON RANIMA(3),RELIHA(2),RCENDE(3),RORWHY(5)
0090 COMMON ROVRDB(7,10),RSCCEC(6),RSUBSO(8),RSURHY(6)
0091 COMMON RTOPSO(9),RVECT(2)
0092 C
0093 C PEACI,TECON,OPUSE SUBSYSTEM PARAMETERS
0094 C
0095 COMMON CAAIM,CADAH,CADEN(3),CADFP(3),CADIM
0096 COMMON CADC(2),CAC,CACF,CALF,CADH
0097 COMMON CADG,CADCAF,CAHCAF,CAHCTC,CALF
0098 COMMON CARZFC,CASF,CACNC,CCTEC,COTRM
0099 COMMON COTRP,FAVC(5),PFCTOP,PFAC,RELTEC(27,34)
0100 COMMON TCAR(5),THICK(10),THKTC,TTL(40)
0101 C
0102 INTERIOR EXIT,CLMA,CBES,CWHY,OVRDB,CDCL
0103 INTERIOR SCCL,CWHY,TPCL,VCTA,ANIM

```

```

0104      INTEGER CLIMAT, GENDEC, GRWHYD, GVRBDN
0105      INTEGER SOCECH, SUBSOI, SURHYD, TOPSOI
0106      INTEGER VLOETA, ANIMAL
0107      INTEGER RCLIMA, RSENDE, RGRWHY, RGVREB, RSOCEC
0108      INTEGER RSUBSO, RSURHY, RTOPSO, RVEGET, RANIMA
0109      INTEGER RCLTEC, TTL
0110      C
0111      INTEGER COMMON (1)
0112      EQUIVALENCE (COMMON (1), ITER (1))
0113      EQUIVALENCE (IARRY (1), LUT)
0114      EQUIVALENCE (IARY2 (1), ISTRK)
0115      EQUIVALENCE (IARY2 (2), ISECT)
0116      EQUIVALENCE (IARY2 (3), ICODE)
0117      EQUIVALENCE (IARY2 (4), LEN)
0118      C
0119      LOGICAL LER
0120      C
0121      C
0122      INTEGER SON(3)
0123      C
0124      C      SET THE LENGTH OF THE COMMON TRANSFER
0125      C
0126      LEN = 6176 - 6144
0127      C
0128      C      LOAD THE ID SEGMENT OF THE SON
0129      C
0130      CALL IDGEC (SON, 1)
0131      C
0132      C      WRITE COMMON TO THE ALLOCATED TRACKS
0133      C
0134      CALL EXEC(2,66,COMMON,6144,ISTRK,ISECT)
0135      CALL EXEC(2,66,COMMON(6145),LEN,ISTRK+1,ISECT)
0136      C
0137      C      SWAP CONTROL TO SON
0138      C
0139      CALL EXEC(9,SON,ISTRK,ISECT,ICODE,LEN)
0140      C
0141      C      READ COMMON BACK FROM THE TRACKS
0142      C
0143      CALL EXEC(1,66,COMMON,6144,ISTRK,ISECT)
0144      CALL EXEC(1,66,COMMON(6145),LEN,ISTRK+1,ISECT)
0145      C
0146      C      RELEASE THE ID SEGMENT
0147      C
0148      CALL IDGEC(SON,2)
0149      C
0150      RETURN
0151      END
0152      END*

```

&TECOX 1=00004 IS ON CR00015 USING 00004 BLKS R=0000

```
0001  FTN4
0002  C
0003  C      ** TECON SCHEDULING PROGRAM - CLAIM SWAP CONTROL **
0004  C
0005  C      PROGRAM TECOX
0006  C
0007  C      COMMON ICOM (6176)
0008  C
0009  C      EQUIVALENCE (ICOM (51), ISTRK),
0010  C      >          (ICOM (52), ISECT),
0011  C      >          (ICOM (53), ICODE),
0012  C      >          (ICOM (54), LEN)
0013  C
0014  C      RECOVER PARAMETERS
0015  C
0016  C      CALL RMPAR (ICOM (51))
0017  C
0018  C      READ COMMON FROM THE DISC
0019  C
0020  C      CALL EXEC (1,66,ICOM,6144,ISTRK,ISECT)
0021  C      CALL EXEC (1,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0022  C
0023  C      SCHEDULE TECON
0024  C
0025  C      CALL TECON
0026  C
0027  C      WRITE COMMON BACK TO THE DISC
0028  C
0029  C      CALL EXEC (2,66,ICOM,6144,ISTRK,ISECT)
0030  C      CALL EXEC (2,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0031  C
0032  C      END
0033  C      END$
```



&TFCDX T=00004 IS ON CR00015 USING 00004 BLKS R=0033

```
0001  FTN4
0002  C
0003  C      **** TFCD SCHEDULING PROGRAM ****
0004  C
0005  C      PROGRAM TFCDX
0006  C
0007  C      COMMON ICOM (6176)
0008  C
0009  C      EQUIVALENCE (ICOM (51), ISTRK),
0010  >                  (ICOM (52), ISECT),
0011  >                  (ICOM (53), ICODE),
0012  >                  (ICOM (54), LEN)
0013  C
0014  C      RECOVER PARAMETERS
0015  C
0016  C      CALL RMPAR (ICOM (51))
0017  C
0018  C      READ COMMON FROM THE DISC
0019  C
0020  C      CALL EXEC (1,66,ICOM,6144,ISTRK,ISECT)
0021  C      CALL EXEC (1,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0022  C
0023  C      SCHEDULE TFCD
0024  C
0025  C      CALL TFCD
0026  C
0027  C      WRITE COMMON BACK TO THE DISC
0028  C
0029  C      CALL EXEC (2,66,ICOM,6144,ISTRK,ISECT)
0030  C      CALL EXEC (2,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0031  C
0032  C      END
0033  END$
```

&TOPSX T=00004 IS ON CR00015 USING 00004 BLKS R=0000

```
0001  FTN4
0002  C
0003  C      ** TOPSO SCHEDULING PROGRAM - CLAIM SWAP CONTROL **
0004  C
0005      PROGRAM TOPSX
0006  C
0007      COMMON ICOM (6176)
0008  C
0009      EQUIVALENCE (ICOM (51), ISTRK),
0010      >              (ICOM (52), ISECT),
0011      >              (ICOM (53), ICODE),
0012      >              (ICOM (54), LEN)
0013  C
0014  C      RECOVER PARAMETERS
0015  C
0016      CALL RMPAR (ICOM (51))
0017  C
0018  C      READ COMMON FROM THE DISC
0019  C
0020      CALL EXEC (1,66,ICOM,6144,ISTRK,ISECT)
0021      CALL EXEC (1,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0022  C
0023  C      SCHEDULE TOPSO
0024  C
0025      CALL TOPSO
0026  C
0027  C      WRITE COMMON BACK TO THE DISC
0028  C
0029      CALL EXEC (2,66,ICOM,6144,ISTRK,ISECT)
0030      CALL EXEC (2,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0031  C
0032      END
0033  END*
```

&TSGES T=00004 IS ON CR00015 USING 00007 BLKS R=0000

```
0001  FTN4
0002  C
0003  C      FILE : &TSGES
0004  C      **** TSGE SUBROUTINES USING CLAIM SWAP CONTROL ****
0005  C
0006      SUBROUTINE TSXBA
0007      COMMON ICOM (6176)
0008      INTEGER TSXBX (3)
0009      DATA TSXEX / 2HTS, 2HXB, 2HX /
0010      CALL SWAPC (TSXBX)
0011      RETURN
0012      END
0013  C
0014  C
0015      SUBROUTINE TSIHB
0016      COMMON ICOM (6176)
0017      INTEGER TSIHX (3)
0018      DATA TSIHX / 2HTS, 2HIH, 2HX /
0019      CALL SWAPC (TSIHX)
0020      RETURN
0021      END
0022  C
0023      SUBROUTINE TSIFG
0024      COMMON ICOM (6176)
0025      INTEGER TSIFX (3)
0026      DATA TSIFX / 2HTS, 2HIF, 2HX /
0027      CALL SWAPC (TSIFX)
0028      RETURN
0029      END
0030  C
0031      SUBROUTINE TSIFN
0032      COMMON ICOM (6176)
0033      INTEGER TSIFO (3)
0034      DATA TSIFO / 2HTS, 2HIF, 2HO /
0035      CALL SWAPC (TSIFO)
0036      RETURN
0037      END
0038  C
0039      SUBROUTINE TSSCI
0040      COMMON ICOM (6176)
0041      INTEGER TSSCX (3)
0042      DATA TSSCX / 2HTS, 2HSC, 2HX /
0043      CALL SWAPC (TSSCX)
0044      RETURN
0045      END
0046  C
0047      SUBROUTINE TSSCF
0048      COMMON ICOM (6176)
0049      INTEGER TSSCO (3)
0050      DATA TSSCO / 2HTS, 2HSC, 2HO /
0051      CALL SWAPC (TSSCO)
0052      RETURN
0053      END
0054  C
```



```

0055      SUBROUTINE TSXFS
0056      COMMON ICOM (6176)
0057      INTEGER TSXFX (3)
0058      DATA TSXFX / 2HTS, 2HXF, 2HX /
0059      CALL SWAPC (TSXFX)
0060      RETURN
0061      END
0062  C
0063      SUBROUTINE TSXST
0064      COMMON ICOM (6176)
0065      INTEGER TSXSX (3)
0066      DATA TSXSX / 2HTS, 2HXS, 2HX /
0067      CALL SWAPC (TSXSX)
0068      RETURN
0069      END
0070  C
0071  END$

```

8TSGEX T=00004 IS ON CR00015 USING 00004 BLKS R=0000

```
0001  FYN4
0002  C
0003  C      ** TSGE SCHEDULING PROGRAM - CLAIM SWAP CONTROL **
0004  C
0005  PROGRAM TSGEX
0006  C
0007  COMMON ICOM (6176)
0008  C
0009  EQUIVALENCE (ICOM (51), ISTRK),
0010  >          (ICOM (52), ISECT),
0011  >          (ICOM (53), ICODE),
0012  >          (ICOM (54), LEN)
0013  C
0014  C      RECOVER PARAMETERS
0015  C
0016  CALL RMPAR (ICOM (51))
0017  C
0018  C      READ COMMON FROM THE DISC
0019  C
0020  CALL EXEC (1,66,ICOM,6144,ISTRK,ISECT)
0021  CALL EXEC (1,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0022  C
0023  C      SCHEDULE TSGE
0024  C
0025  CALL TSGE
0026  C
0027  C      WRITE COMMON BACK TO THE DISC
0028  C
0029  CALL EXEC (2,66,ICOM,6144,ISTRK,ISECT)
0030  CALL EXEC (2,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0031  C
0032  END
0033  END$
```

&TSIFS Y=00004 IS ON CR00015 USING 00002 BLKS R=0000

```
0001  FTN4
0002  C
0003  C      FILE : &TSIFS
0004  C      *** TSIFG SUBROUTINES USING CLAIM SWAP CONTROL ***
0005  C
0006      SUBROUTINE TSXBA
0007      COMMON ICOM (6176)
0008      INTEGER TSXBX (3)
0009      DATA   TSXBX / 2HTS, 2HXB, 2HX /
0010      CALL SWAPC (TSXBX)
0011      RETURN
0012      END
0013  C
0014      SUBROUTINE TSXFS
0015      COMMON ICOM (6176)
0016      INTEGER TSXFX (3)
0017      DATA   TSXFX / 2HTS, 2HXF, 2HX /
0018      CALL SWAPC (TSXFX)
0019      RETURN
0020      END
0021  END$
```



&TSIFO T=00004 IS ON CR00015 USING 00004 BLKS R=0000

```
0001  FTN4
0002  C
0003  C      ** TSIFN SCHEDULING PROGRAM - CLAIM SWAP CONTROL **
0004  C
0005      PROGRAM TSIFO
0006  C
0007      COMMON ICOM (6176)
0008  C
0009      EQUIVALENCE (ICOM (51), ISTRK),
0010      >          (ICOM (52), ISECT),
0011      >          (ICOM (53), ICODE),
0012      >          (ICOM (54), LEN)
0013  C
0014  C      RECOVER PARAMETERS
0015  C
0016      CALL RMPAR (ICOM (51))
0017  C
0018  C      READ COMMON FROM THE DISC
0019  C
0020      CALL EXEC (1,66,ICOM,6144,ISTRK,ISECT)
0021      CALL EXEC (1,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0022  C
0023  C      SCHEDULE TSIFN
0024  C
0025      CALL TSIFN
0026  C
0027  C      WRITE COMMON BACK TO THE DISC
0028  C
0029      CALL EXEC (2,66,ICOM,6144,ISTRK,ISECT)
0030      CALL EXEC (2,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0031  C
0032      END
0033  END$
```

&TSIFX T=00004 IS ON CR00015 USING 00004 BLKS R=0000

```
0001  FTN4
0002  C
0003  C      ** TSIFG SCHEDULING PROGRAM - CLAIM SWAP CONTROL **
0004  C
0005  C      PROGRAM TSIFX
0006  C
0007  C      COMMON ICOM (6176)
0008  C
0009  C      EQUIVALENCE (ICOM (51), ISTRK),
0010  >                (ICOM (52), ISECT),
0011  >                (ICOM (53), ICODE),
0012  >                (ICOM (54), LEN)
0013  C
0014  C      RECOVER PARAMETERS
0015  C
0016  C      CALL RMPAR (ICOM (51))
0017  C
0018  C      READ COMMON FROM THE DISC
0019  C
0020  C      CALL EXEC (1,66,ICOM,6144,ISTRK,ISECT)
0021  C      CALL EXEC (1,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0022  C
0023  C      SCHEDULE TSIFG
0024  C
0025  C      CALL TSIFG
0026  C
0027  C      WRITE COMMON BACK TO THE DISC
0028  C
0029  C      CALL EXEC (2,66,ICOM,6144,ISTRK,ISECT)
0030  C      CALL EXEC (2,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0031  C
0032  C      END
0033  END*
```

&TSIHX 1=00004 IS ON CRO0015 USING 00004 BLKS R=0000

```
0001  FTN4
0002  C
0003  C      ** TSIHB SCHEDULING PROGRAM - CLAIM SWAP CONTROL **
0004  C
0005      PROGRAM TSIHX
0006  C
0007      COMMON ICOM (6176)
0008  C
0009      EQUIVALENCE (ICOM (51), ISTRK),
0010      >          (ICOM (52), ISECT),
0011      >          (ICOM (53), ICODE),
0012      >          (ICOM (54), LEN)
0013  C
0014  C      RECOVER PARAMETERS
0015  C
0016      CALL RMPAR (ICOM (51))
0017  C
0018  C      READ COMMON FROM THE DISC
0019  C
0020      CALL EXEC (1,66,ICOM,6144,ISTRK,ISECT)
0021      CALL EXEC (1,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0022  C
0023  C      SCHEDULE TSIHB
0024  C
0025      CALL TSIHB
0026  C
0027  C      WRITE COMMON BACK TO THE DISC
0028  C
0029      CALL EXEC (2,66,ICOM,6144,ISTRK,ISECT)
0030      CALL EXEC (2,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0031  C
0032      END
0033  END$
```



2TSSC0 T=00004 IS ON CR00015 USING 00004 BLKS R=0000

```
0001  ITN4
0002  C
0003  C      ** TSSCF SCHEDULING PROGRAM - CLAIM SWAP CONTROL **
0004  C
0005  C      PROGRAM TSSC0
0006  C
0007  C      COMMON ICOM (6176)
0008  C
0009  C      EQUIVALENCE (ICOM (51), ISTRK),
0010  C      >          (ICOM (52), ISECT),
0011  C      >          (ICOM (53), ICODE),
0012  C      >          (ICOM (54), LEN)
0013  C
0014  C      RECOVER PARAMETERS
0015  C
0016  C      CALL RMPAR (ICOM (51))
0017  C
0018  C      READ COMMON FROM THE DISC
0019  C
0020  C      CALL EXEC (1,66,ICOM,6144,ISTRK,ISECT)
0021  C      CALL EXEC (1,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0022  C
0023  C      SCHEDULE TSSCF
0024  C
0025  C      CALL TSSCF
0026  C
0027  C      WRITE COMMON BACK TO THE DISC
0028  C
0029  C      CALL EXEC (2,66,ICOM,6144,ISTRK,ISECT)
0030  C      CALL EXEC (2,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0031  C
0032  C      END
0033  C      END$
```

2TSSCX T=00004 IS ON CR00015 USING 00004 BLKS R=0000

```
0001  FTN4
0002  C
0003  C      ** TSSCI SCHEDULING PROGRAM - CLAIM SWAP CONTROL ***
0004  C
0005      PROGRAM TSSCX
0006  C
0007      COMMON ICOM (6176)
0008  C
0009      EQUIVALENCE (ICOM (51), ISTRK),
0010      >              (ICOM (52), ISECT),
0011      >              (ICOM (53), ICODE),
0012      >              (ICOM (54), LEN)
0013  C
0014  C      RECOVER PARAMETERS
0015  C
0016      CALL RMPAR (ICOM (51))
0017  C
0018  C      READ COMMON FROM THE DISC
0019  C
0020      CALL EXEC (1,66,ICOM,6144,ISTRK,ISECT)
0021      CALL EXEC (1,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0022  C
0023  C      SCHEDULE TSSCI
0024  C
0025      CALL TSSCI
0026  C
0027  C      WRITE COMMON BACK TO THE DISC
0028  C
0029      CALL EXEC (2,66,ICOM,6144,ISTRK,ISECT)
0030      CALL EXEC (2,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0031  C
0032      END
0033  END$
```

&TSSTO T=00004 IS ON CR00015 USING 00004 BLKS R=0000

```
0001  FTN4
0002  C
0003  C      ** TSSTF SCHEDULING PROGRAM - CLAIM SWAP CONTROL **
0004  C
0005  C      PROGRAM TSSTO
0006  C
0007  C      COMMON ICOM (6176)
0008  C
0009  C      EQUIVALENCE (ICOM (51), ISTRK),
0010  C      >          (ICOM (52), ISECT),
0011  C      >          (ICOM (53), ICODE),
0012  C      >          (ICOM (54), LEN)
0013  C
0014  C      RECOVER PARAMETERS
0015  C
0016  C      CALL RMPAR (ICOM (51))
0017  C
0018  C      READ COMMON FROM THE DISC
0019  C
0020  C      CALL EXEC (1,66,ICOM,6144,ISTRK,ISECT)
0021  C      CALL EXEC (1,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0022  C
0023  C      SCHEDULE TSSTF
0024  C
0025  C      CALL TSSTF
0026  C
0027  C      WRITE COMMON BACK TO THE DISC
0028  C
0029  C      CALL EXEC (2,66,ICOM,6144,ISTRK,ISECT)
0030  C      CALL EXEC (2,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0031  C
0032  C      END
0033  C      END$
```



2TSSTX T=00004 IS ON CR00015 USING 00004 BLKS R=0000

```
0001  FIN4
0002  C
0003  C      ** TSST SCHEDULING PROGRAM - CLAIM SWAP CONTROL **
0004  C
0005  PROGRAM TSSTX
0006  C
0007  COMMON ICOM (6176)
0008  C
0009  EQUIVALENCE (ICOM (51), ISTRK),
0010  >          (ICOM (52), ISECT),
0011  >          (ICOM (53), ICODE),
0012  >          (ICOM (54), LEN)
0013  C
0014  C      RECOVER PARAMETERS
0015  C
0016  CALL RMPAR (ICOM (51))
0017  C
0018  C      READ COMMON FROM THE DISC
0019  C
0020  CALL EXEC (1,66,ICOM,6144,ISTRK,ISECT)
0021  CALL EXEC (1,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0022  C
0023  C      SCHEDULE TSST
0024  C
0025  CALL TSST
0026  C
0027  C      WRITE COMMON BACK TO THE DISC
0028  C
0029  CALL EXEC (2,66,ICOM,6144,ISTRK,ISECT)
0030  CALL EXEC (2,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0031  C
0032  END
0033  END*
```

&TSXBX T=00004 IS ON CR00015 USING 00004 BLKS R=0000

```
0001  FTN4
0002  C
0003  C      ** TSXBA SCHEDULING PROGRAM - CLAIM SWAP CONTROL **
0004  C
0005  PROGRAM TSXBX
0006  C
0007  COMMON ICOM (6176)
0008  C
0009  EQUIVALENCE (ICOM (51), ISTRK),
0010  >          (ICOM (52), ISECT),
0011  >          (ICOM (53), ICODE),
0012  >          (ICOM (54), LEN)
0013  C
0014  C      RECOVER PARAMETERS
0015  C
0016  CALL RMPAR (ICOM (51))
0017  C
0018  C      READ COMMON FROM THE DISC
0019  C
0020  CALL EXEC (1,66,ICOM,6144,ISTRK,ISECT)
0021  CALL EXEC (1,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0022  C
0023  C      SCHEDULE TSXBA
0024  C
0025  CALL TSXBA
0026  C
0027  C      WRITE COMMON BACK TO THE DISC
0028  C
0029  CALL EXEC (2,66,ICOM,6144,ISTRK,ISECT)
0030  CALL EXEC (2,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0031  C
0032  END
0033  END$
```

&TSXFX T=00004 IS ON CR00015 USING 00004 BLKS R=0000

```
0001  FTN4
0002  C
0003  C      ** TSXFS SCHEDULING PROGRAM - CLAIM SWAP CONTROL **
0004  C
0005      PROGRAM TSXFX
0006  C
0007      COMMON ICOM (6176)
0008  C
0009      EQUIVALENCE (ICOM (51), ISTRK),
0010      >          (ICOM (52), ISECT),
0011      >          (ICOM (53), ICODE),
0012      >          (ICOM (54), LEN)
0013  C
0014  C      RECOVER PARAMETERS
0015  C
0016      CALL RMPAR (ICOM (51))
0017  C
0018  C      READ COMMON FROM THE DISC
0019  C
0020      CALL EXEC (1,66,ICOM,6144,ISTRK,ISECT)
0021      CALL EXEC (1,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0022  C
0023  C      SCHEDULE TSXFS
0024  C
0025      CALL TSXFS
0026  C
0027  C      WRITE COMMON BACK TO THE DISC
0028  C
0029      CALL EXEC (2,66,ICOM,6144,ISTRK,ISECT)
0030      CALL EXEC (2,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0031  C
0032      END
0033  END$
```



&TSXSS T=00004 IS ON CR00015 USING 00002 BLKS R=0000

```
0001  FTN4
0002  C
0003  C      FILE : &TSXSS
0004  C      *** TSXST SUBROUTINES USING CLAIM SWAP CONTROL ***
0005  C
0006      SUBROUTINE TSSTP
0007      INTEGER TSSTO (3)
0008      DATA TSSTO /2HTS,2HST,2HO /
0009      CALL SWAPC (TSSTO)
0010      RETURN
0011      END
0012  END$
```

8TSXSX T=00004 IS ON CRO0015 USING 00004 BLKS R=0000

```
0001 FYN4
0002 C
0003 C      ** TSXST SCHEDULING PROGRAM - CLAIM SWAP CONTROL **
0004 C
0005 PROGRAM TSXSX
0006 C
0007 COMMON ICOM (6176)
0008 C
0009 EQUIVALENCE (ICOM (51), ISTRK),
0010 >          (ICOM (52), ISECT),
0011 >          (ICOM (53), ICODE),
0012 >          (ICOM (54), LEN)
0013 C
0014 C      RECOVER PARAMETERS
0015 C
0016 CALL RMPAR (ICOM (51))
0017 C
0018 C      READ COMMON FROM THE DISC
0019 C
0020 CALL EXEC (1,66,ICOM,6144,ISTRK,ISECT)
0021 CALL EXEC (1,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0022 C
0023 C      SCHEDULE TSXST
0024 C
0025 CALL TSXST
0026 C
0027 C      WRITE COMMON BACK TO THE DISC
0028 C
0029 CALL EXEC (2,66,ICOM,6144,ISTRK,ISECT)
0030 CALL EXEC (2,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0031 C
0032 END
0033 END$
```

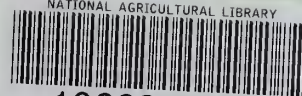
&VEGEX T=00004 IS ON CR00015 USING 00004 BLKS R=0000

```
0001  FTN4
0002  C
0003  C      ** VEGET SCHEDULING PROGRAM - CLAIM SWAP CONTROL **
0004  C
0005  C      PROGRAM VEGEX
0006  C
0007  C      COMMON ICOM (6176)
0008  C
0009  C      EQUIVALENCE (ICOM (51), ISTRK),
0010  C      >          (ICOM (52), ISECT),
0011  C      >          (ICOM (53), ICODE),
0012  C      >          (ICOM (54), LEN)
0013  C
0014  C      RECOVER PARAMETERS
0015  C
0016  C      CALL RMPAR (ICOM (51))
0017  C
0018  C      READ COMMON FROM THE DISC
0019  C
0020  C      CALL EXEC (1,66,ICOM,6144,ISTRK,ISECT)
0021  C      CALL EXEC (1,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0022  C
0023  C      SCHEDULE VEGET
0024  C
0025  C      CALL VEGET
0026  C
0027  C      WRITE COMMON BACK TO THE DISC
0028  C
0029  C      CALL EXEC (2,66,ICOM,6144,ISTRK,ISECT)
0030  C      CALL EXEC (2,66,ICOM(6145),LEN,ISTRK+1,ISECT)
0031  C
0032  C      END
0033  C      END*
```





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2

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